WESTERN STATES EDITION

DOMESTIC ENGINEERING

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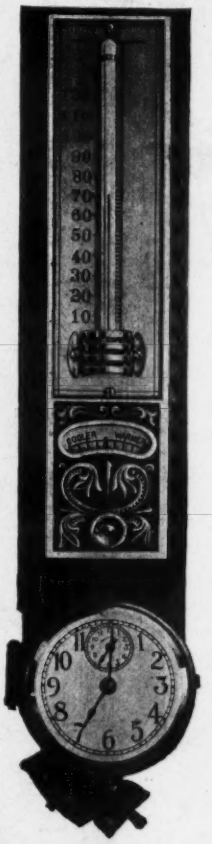

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First: THE JEWELL is the ORIGINAL TIME CLOCK THERMOSTAT.

Second: MOTOR is weight driven—insuring MAXIMUM POWER at all times. Has SAFETY SWITCH which leaves drafts closed if motor is neglected and allowed to run down. The CUT OUT SWITCH enables drafts to be reversed without going to the Thermostat.

Third: BATTERIES are all wired and in a strong wooden box securely bolted to cast iron shelf which holds motor.

Fourth: INSTALLATION—The work required to install the JEWELL is reduced to the minimum. Four screws fasten the motor in position in furnace or boiler room. Four screws put up our IMPROVED SWING PULLEYS. Two screws put up the Thermostat in living apartments. All that is left to do is to run chains over pulleys to dampers and connect Thermostat and motor by three wire cable. Simple, is it not?

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THE JEWELL MANUFACTURING CO.

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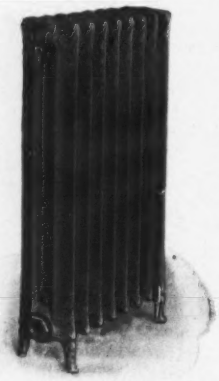

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WYCKOFF'S WATER PROOF PIPE COVERING
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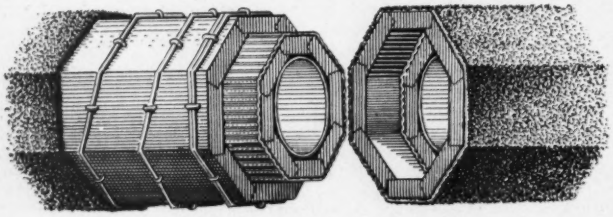

The Wyckoff Patent Pipe Covering
is so carefully manufactured that a perfect pipe is produced, thoroughly water-proof and guaranteed not to check open. It is thoroughly non-conductive and absolutely prevents the radiation of heat.

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ROSS VALVE MFG. CO., Troy, New York.

REGULATING VALVES
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WATER
FEED WATER FILTERS
FOR
Land and Marine Boilers.

INDEX TO ADVERTISEMENTS ON PAGE XXX

The Late R. B. Moodie, of Dayton, Ohio.

President of the National Association of Master Plumbers 1906-1907, member of the firm of Ware & Moodie, Dayton, Ohio. He passed on at his home in that city on Tuesday, September 28 (See Obituary column in this issue).

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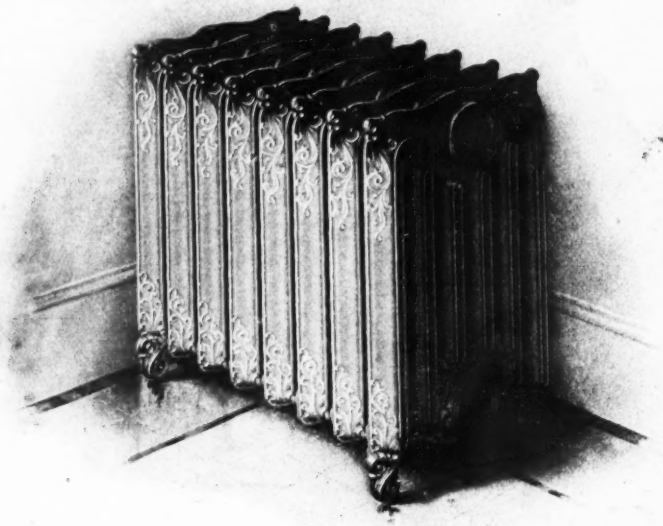


MOTT'S "Utility" Radiators

are a utility in in every sense of the word.

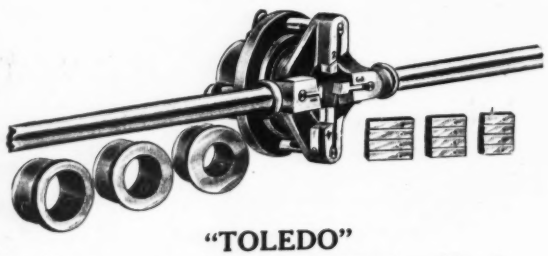
The J. L. Mott Iron Works

NEW YORK, - N. Y.

"Many men of many minds," but

"Toledo" Pipe Threaders

For Everybody

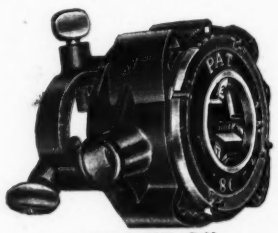


"TOLEDO"

Adjustable Threading Device No. 1

Capacity, 1" to 2" pipe, inclusive.
List Price, $24.00

This tool is furnished with a **separate set of dies and bushings for each size pipe,** which is the correct mechanical principle. There is no better threading device on earth than this, **and none of other makes as good.**



"TOLEDO"

Adjustable Threading Device No. 10

Capacity, 1" to 2" pipe, inclusive.
List Price, $28.00

This tool is **entirely self-contained.** **One set of dies** in the tool body **will thread four sizes of pipe.** There is no other tool of this character as good because this is by all odds the simplest.

"Pay your money and take your choice,"—But buy a "TOLEDO"

Detailed information for the asking

THE TOLEDO PIPE THREADING MACHINE CO., TOLEDO, O.

THE ADVERTISEMENTS IN DOMESTIC ENGINEERING ARE INDEXED. TURN TO PAGE XXX.

DOMESTIC ENGINEERING

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Jno. K. Allen, President and Treasurer.
Elmer Crawford, Vice-President.
Frank P. Keeney, Secretary.
E. De Forest Winslow, Asst. Secretary.
Carl W. Miller, Asst. Treasurer.

Jno. K. Allen, Editor.
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NOTICE TO ADVERTISERS.
Copy and cuts for advertisements intended for a particular issue should reach the office of DOMESTIC ENGINEERING on Wednesday of the previous week if it is desired that a proof of the advertisement shall be submitted. New advertisements can be received up to noon of Wednesday of the week of issue, but no proof can be shown.

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Member of the Chicago Trade Press Association.
Member of the Federation of the Trade Press Associations of the United States.

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Suggestion:
Cut out; frame neatly; put in show window; change weekly.

Your Children:

They are again at school, pent in four walls, bent over desks and books; forty or fifty in one room; several hundred using a toilet room in common. What do you know about the heating, the ventilation and the toilet facilities your child is compelled to submit to daily? He cannot possibly know why he should have fresh air, an agreeable temperature, and clean, individual toilet facilities. But you know, and what are you doing to see that the heating system in the public school is right; the ventilation adequate; the toilet rooms sanitary; the water supply uncontaminated?

Some Figures and Their Meaning

In the ten years from 1880 to 1890 Chicago more than doubled its population, while 792 townships in the State of Illinois were depleted. During the same period the number of people living in cities in the United States increased 61 per cent, while 39 per cent of all the townships organized in 1880 lost in population.

In 1790 the proportion of population residing in cities of 8,000 or more was 3.4 per cent; in 1900 this proportion had increased to 33.1 per cent.

There is a deep significance in these facts for the plumbing and heating trade. The redistribution of population which is seen to have occurred in European countries to quite as remarkable a degree as in our own, by which the cities are constantly growing larger and the country districts less thickly populated, means much to the plumber, steam and hot-water fitter. Whenever a family removes from the country to a city it becomes a consumer of plumbing and heating goods. There is no choice so far as plumbing goods are concerned, because either law or custom decrees it. There is no way provided to dispose of household and body wastes in urban communities except through plumbing and drainage systems. This recently removed family probably at once becomes a user of steam or water heating goods, or will so become in a brief period after its arrival in a city, because the most economical method of distributing heat yet practiced is through one of these two methods. Consequently this movement of population constantly feeding the cities is causing a natural and very great yearly increase in the demand for plumbing and heating goods, for persons who contract for their installation, and for journeymen to put them in.

This Much is Clear. The medical profession complains of the rapid approach of drugless healing. With such rapidity is the number of people who resort to some system of healing sickness increasing, that medical authorities say that while more physicians are graduated by the schools each year, the average number of possible customers for each doctor is rapidly decreasing. The medical profession has ceased to be attractive from a financial standpoint.

The ministers complain loudly of the waning influence of the pulpit to attract listeners to the pews, and it is evident that the profession of the preacher has lost much of its attraction for young men who are quick to feel the operations of the law of supply and demand.

Turning to some business pursuits we find similar reports. Your barber will tell you that Charlie Gillette and his handy little safety razor has diminished the tonsorial artist's business 60 per cent.

Happily, I believe, do most men learn of the rapidly diminishing profit in the saloon business; while the

bicycle trade—which was once as promising as is the automobile business today, is almost a forgotten industry.

Not so with the plumber and steam-fitter. His is a vocation which partakes of the nature of both a profession and a business; and, when compared with the professions and businesses which are actually losing ground, his business is greatly increasing.

The business, taken as a whole, must increase rapidly in volume. The growth in cities, which is apparently in obedience to an inflexible economic law, decrees it; the rapid increase in wealth of this country and all its citizens, encourages it; the ability of the farmer and suburban dweller to have household water supplies and septic sewage disposal systems still further increases it.

Then, why so many impecunious plumbers and steam-fitters? It is not because the business and heating is retrograding. But it is because so many men engaged in it place limitations on themselves; the limitations of **ignorance, thriftlessness and vice;** the limitations entailed by **greed, avarice** and **lust for wealth.**

Remove all these impediments and the business of plumbing and steam fitting will be as good a business to follow as any other open to you. And these can be removed because they are placed by the man himself, and he, himself, can remove them.

Jno. K. Allen.

Building for the Future*

Water Purification and Drainage in the City of New Orleans, La.

By Charles B. Starkey

The city of New Orleans, La., has in the past few years instituted some gigantic enterprises in the way of drainage canals, sewage disposal and water purification systems.

These improvements have cost millions of dollars and they have placed the Crescent City far up in the ranks in regard to improvements and sanitation and have provided this, the second port in the United States, with the means of furnishing water and sanitation for a future population of over one million people, towards which point the city is making rapid strides and which it will eventually reach some time after the completion of the Panama Canal, which must, of necessity, throw a larger amount of business and traffic directly to New Orleans.

The present drainage system in the city of New Orleans has done much to benefit the city. This system is, in many ways unique, and several perplexing problems had to be met with and overcome in the course of construction. The "Crescent City" proper, covers an area of about 37½ square miles and lies in a huge basin surrounded all around its outer edge by a rim of earth to keep the water out, as the city is, at times, several feet lower than the level of the Mississippi river and Lake Pontchartrain. It will at once be seen that while this river or bank of earth protects the city from floods, IT ALSO KEEPS IN THE WATER WHICH IS PRECIPITATED BY STORMS, THAT CANNOT, OF ITSELF, DRAIN OUT FROM THE CITY.

To give an idea of the bulk of water which would accumulate from a fairly heavy rain storm, say two inches (which happens in New Orleans five or six times a year), it may be stated that such a rainfall would precipitate on the area of the city 1,302,000,000 gallons, and to pump out this rainfall in two hours would require the removal EVERY MINUTE OF A MASS OF WATER WHICH, IF SHAPED LIKE A CYLINDER, WOULD BE 300 FEET LONG AND 78 FEET IN DIAMETER.

From the foregoing statements, some idea may be conceived of the magnitude of the undertaking accomplished by the

Drainage System of New Orleans.

This consists of a main canal extending along Broad street, which lies in the lowest part of the city.

Into this canal the drainage of the areas between the river front and Broad street will flow by gravity through the several sub-canals, which, in turn are supplied with water from the open gutters and, in newly paved streets, by sub-surface drain pipes.

The plan proposes that the main canal, which is not yet constructed, shall receive all the water from the daily flow and from storms of a moderate degree of intensity.

The sub-canals have a natural fall toward the main canal sufficient to permit the flow of water without becoming themselves filled with deposit.

These sub-canals are, therefore, self-cleansing and also deliver water rapidly to the pumping stations.

The main canal runs through a level country having no slope, and it is necessary, in order to make the water flow rapidly enough for speedy removal and also to prevent the deposit of mud, to build the bottom of the canal upon an incline.

As this main canal will extend a distance of about ten miles, to give a proper slope throughout the entire distance would require the canal to be so deep

*For the information and the illustrations contained in this article the writer is indebted to the kindly assistance of Mr. F. S. Shields, Secretary of the New Orleans (La.) Sewage and Water Board, and to articles written by Mr. J. W. Armstrong, Engineer in charge; also to Mr. A. B. Wood, Mechanical Engineer, and Mr. Alfred Raymond, General Manager of the Drainage Operating Department.

at its lower end as to make its construction, after this manner, not only very costly, but highly impracticable.

This difficulty is overcome by locating five pumping stations about two and one-half miles apart, along the canal and dividing the canal into five sections.

The duty of each pumping station is to lift the water form the section of canal above it into the section of canal below it, thus creating a head and causing the water to flow rapidly on to the next section.

Upon reaching pumping station number five. the last along the line, the water is discharged by pumps into the main outfall, which leads to Bayou Bienvenue, and thence to Lake Borgne. While this canal will have a capacity sufficient to receive the daily flow and the water from small storms it would not be sufficient to take care of the large storms.

To provide for the latter contingency it is intended to discharge the surplus from large storms directly into Lake Pontchartrain.

The pumps installed are of the centrifugal or screw types, and the pumping stations have been built large enough to allow for future installations. The pumps for storm water have a discharge capacity of 250 cubic feet per second each, or SIX AND THREE-QUARTER MILLIONS OF GALLONS PER HOUR.

The centrifugal pumps will discharge, under storm conditions, four hundred cubic feet per second, or over ten and three-quarter millions of gallons per hour.

THE SUCTION AND DISCHARGE PIPES OF EACH OF THESE PUMPS IS EIGHT FEET IN DIAMETER. The motors driving the screw pumps are 300-H. P. each and the motors driving the centrifugal pumps are 500-H. P. each.

A general view of the Water Purification Station of New Orleans, La., showing reservoirs, head house, filter gallery and the main pumping station.

To furnish the electric power for these pumps there has been constructed a Central Power Station, which when fully fitted up, will be capable of furnishing some 24,000 horse power.

During the past year when the heavy storms occurred, where proper drainage had been prepared, there was no flooding of those sections of the city.

Under the general Main Drainage System it will take about 900 miles of streets to fully develop the area, WHICH SHOULD THEN BE CAPABLE OF CONTAINING a population of 1,225,000 people.

THE SEWERAGE SYSTEM.

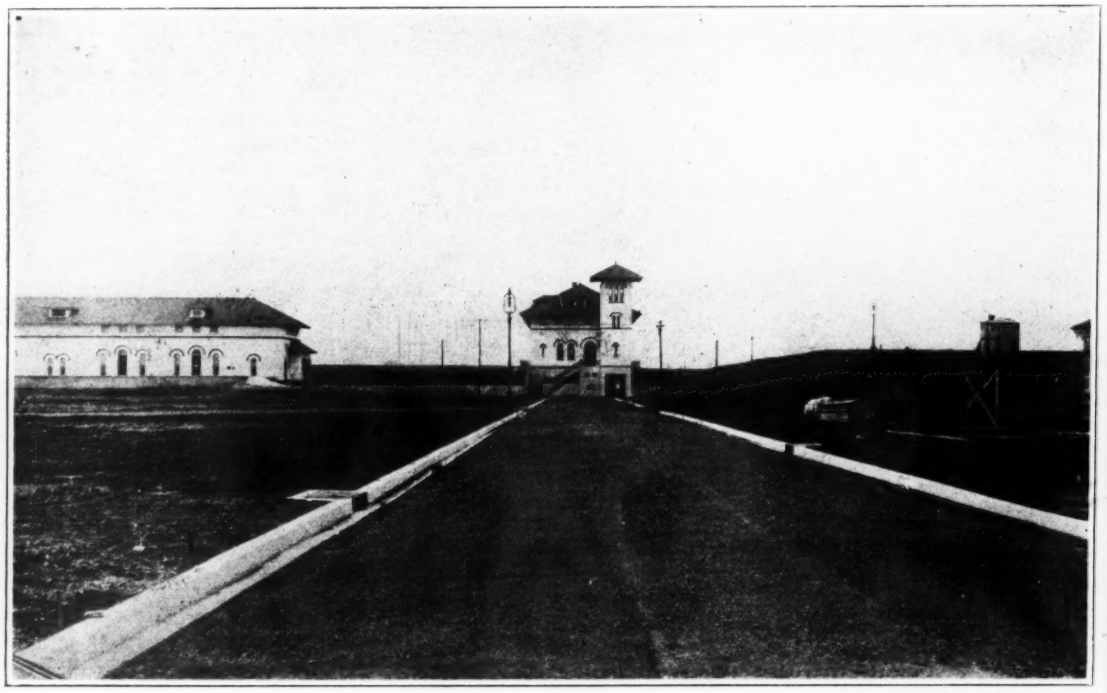
Nearly all the sewage from the city is gathered

together by, first, small lateral sewers, which lead to larger sub-mains and these, in turn, drain into the main sewer.

As the surface is very flat it is not practical to bring this sewer to a central point by a continuous grade. It is necessary, therefore, to build along the line pumping sub-stations, and in some cases on the sub-mains. Also to lift the sewage from one level to another in order to continue its course to the central point. Several of these stations are built drainage canal. The sewers vary in size from eight inches up to six feet in diameter and are anywhere from five to twenty-five feet in depth and discharging into the Mississippi River with lifts of from 30 to 55 feet, depending upon the water level in the river and the amount of sewage discharging.

Many of the sub-stations are of interest from the fact that they operate automatically, without its being necessary to screen the sewage.

The motors are started or stopped by the use of



A front view of the head house at the Water Purification Station in New Orleans, La., giving a portion of the filter gallery and also the clear water reservoirs.

below the street saving large items of cost in the purchase of real estate. It is stated that these underground stations are dry and as fit for electrical apparatus as the stations which are built above ground.

The underground stations are built entirely of concrete and the cost for repairs is very slight. They are kept white upon the inside and light is furnished by a few incandescent globes, while a small ventillating fan, operated all the time, dries out the dampness and prevents the sweating of the walls.

Wherever the main sewers cross a drainage canal, large gates are placed by means of which, in a case of necessity, the sewage may be discharged into the floats in the sewers. These stations have operated in a reliable manner and have saved the city a considerable amount of money by not being obliged to have attendants.

The Waterworks System.

The Mississippi River is quite muddy and is said to contain some 600 parts suspended matter per million; this matter being fine clay, silt, etc. Because of the small population per square mile proportionally, on its water shed and the small amount of sewage which enters the river in the last few hundred miles of its course, the river has good opportunities for self-purification.

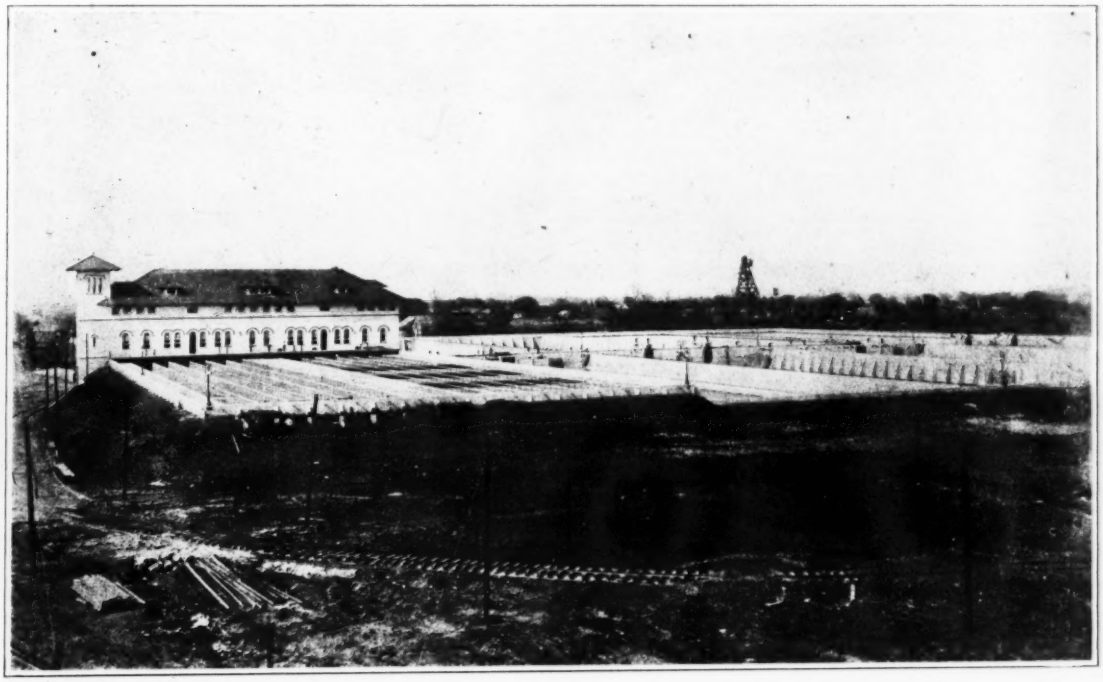
The water supply for New Orleans is taken from the Mississippi River at the uppermost end of the

city and through a 48-inch suction line some three-quarters of a mile in length. The intake is so arranged as to prevent the entrance of any large floating matter. It secures the water from near the surface, where the amount of mud in the water is less in quantity.

The plant in general consists of pumping station, head house, grit reservoirs, lime mixing reservoirs, coagulating reservoirs, filters, and clear water reservoirs.

ing through the lime mixing reservoir, for the elimination of the sulphates.

During the seven hours in the coagulating and settling reservoirs the water is so gradually displaced that the suspended matter in it, already coagulated by the lime mixing (and when necessary, further coagulated by a sulphate of iron addition), deposits nearly all of its suspended matter, and as it leaves these basins, instead of carrying from 200 to 1,500 parts per 1,000,000



A general view of the reservoir system and the head house at the Water Purification Station at New Orleans, La.

The operation of the water purification system is continuous. Low lift pumps are discharging river water into it at one end, and filtered water is coming out of it continuously at the other. In passing through the grit chambers any coarse, heavy suspended matter is removed. As the water enters the lime mixing chamber, lime, to reduce the hardness to the limit of possible reduction, is added in exact proportion to the amount of water passing and to its hardness.

The hour in the lime mixing reservoirs keeps the water in motion and the lime intimately mixed with it until the required chemical reaction is completed, when necessary soda is added as the water is passgallons of such matter, it will only carry from 30 to 60 parts, which can be readily removed by the filters.

The Pumping Station.

It is necessary to lift twice all the water used by the city in the course of ordinary operations.

The first lift is for putting the water through the reservoir system and is done by any one of these very powerful centrifugal pumps.

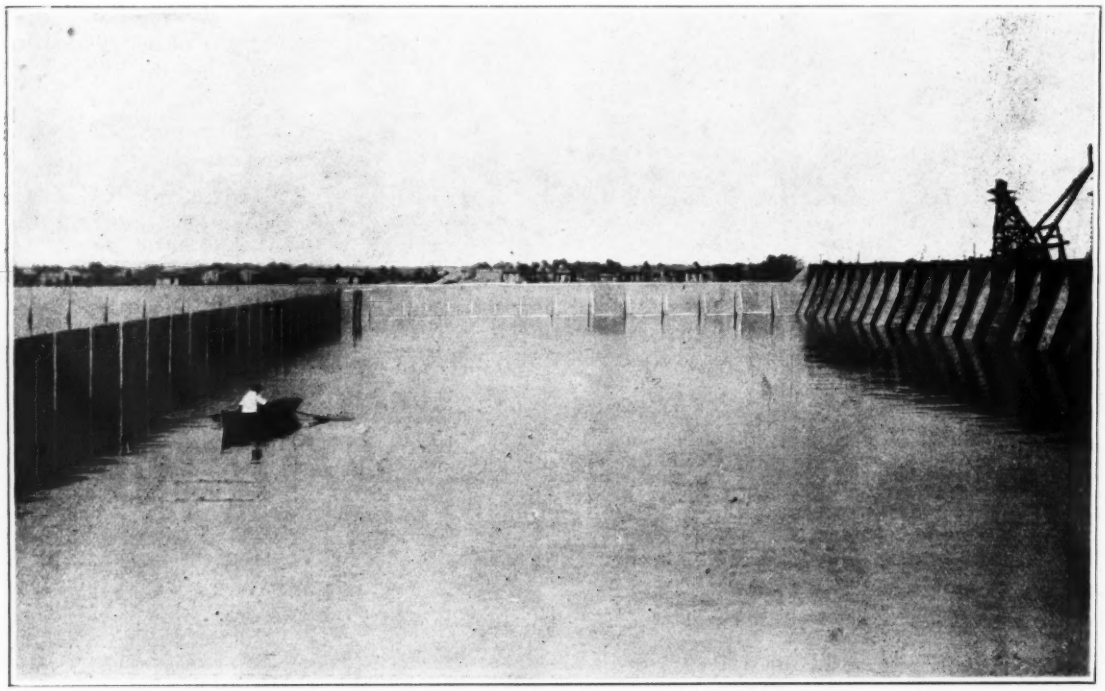
A uniform flow of water must be maintained in order to be sure of the right chemical treatment of the water.

The problem is to supply the right amount of water and not overflow the reservoirs. This is ac-

complished by properly adjusting the valves on the various lines.

THE HEAD HOUSE.

The Head House occupies, as nearly as possible, a position central to the reservoir system. It is here that all treatment of the water takes place, and that the movement of the water is controlled after leaving the low lift pumps. The water passes four times through the Head House, and from the moment it enters the building until it is picked up by the high lift pumps it flows entirely by gravity. The loss of head in passing through the system varies considerably, depending on the conditions of operation. The Head House occupies a ground space of 50x150 feet, and its lower portion for a height of something over 20 feet is built of reinforced concrete. The subdivisions of the lower part of this building are rather complicated on account of the number of times that the water has to pass through, and the number of by-passes and duplicate portions provided. Most of the walls or partitions are reinforced against water pressure in two directions. The building is so designed that water can be passed through either end, leaving the opposite end free for cleaning or repairs. A centrifugal mud pump, operated by a 100-H. P. motor, is located in the front end of this building. Connecting with this pump is an 18-inch pipe system having openings into each compartment of the Head House and each division of the reservoir system. All openings in this line are controlled by sluice gates, operated by wheel stands from the floor above or in the reservoirs from the top of the division wall. At each end of the building there are four rectangular orifice gates of five square feet area each, which are always submerged and through which all water passes on its way to the lime-mixing reservoir. The regulation of these gates is controlled by a single operating stand on the floor above, upon which is an indicator showing the area of the opening below. Within certain limits the operator can regulate the difference in head on the two sides of the orifice gates, varying slightly, of course, as the flow varies. The difference of head is made use of in an ingenious device, invented by Mr. George G. Earl, which automatically, regulates the amount of chemical solution added to the water.



Coagulating reservoir No. 2 at New Orleans, La., partly filled with water.

(To be continued.)

How Hot Water Heating Can be Used in the Ideal Office Building

Written expressly for "Domestic Engineering." All rights reserved.

Heating by hot water. Sources of heat. Systems of piping. Coils.

The heating of an office building by hot water is a work not often undertaken, and like heating by hot air, not always applicable. That hot water circulation may be profitably employed for heating some of the largest buildings is a fact well established. The cost of installation like that of a hot water residence system, is somewhat larger than for a steam heating plant of similar capacity.

Sources of Heat.

The sources of heat for the office building plant are several and some of them may be employed to the exclusion of the others and where present, may all be employed in one plant. The simplest, least common and least adapted to general application is the independent boiler, used only to heat the building and applicable in the building using electric power exclusively, and purchasing that from the central station. Another source might be live steam, possibly from boilers that supply condensing engines that furnish power for the building to be heated, or for an adjoining one. Another source would be the exhaust from steam engines furnishing power to the building to be heated, to an adjoining building, or to both.

The independent boiler plant, the live steam plant, or the exhaust plant may any of them be made of capacity great enough to supply the largest building with no assistance from any other sources.

Other sources may be found in the plant furnishing the live steam or exhaust, which may be of capacity great enough to do all the heating of a small adjoining building or to serve as an auxiliary to the live or exhaust steam. One of these sources is the waste heat contained in the flue gases from the boiler settings and another is the condenser water of the condensing plant. Still another source may be the waste heat of gas or gasolene engines.

All of these sources of heat, if present together, might be arranged to aid each other at once in the economical development of hot water heat for our building.

Systems of Piping.

There are two types of hot water circulating systems in use, one or the other of which will furnish the foundation for our plan. One of these systems is the ordinary open tank system, in which a tank open to the atmosphere is placed above the highest radiator to receive the water crowded upward by its expansion as it is heated. In the other system a similar tank is used for the same purpose but it is closed and provided with a safety valve set to open at a pressure of from five to fifteen pounds per square inch.

The pipes for distributing the water are the same in both cases, a supply main running around the basement and having branches taken from it almost horizontally to the bottoms of supply risers going up through the building to the radiators; similarly a return is run around the basement and has similar branches connecting to return risers coming down through the building from the radiators.

The operation is as follows: Assuming the simplest form of plant, the supply main would be attached to the top of the boiler or boilers, with the return main attached to the bottom. On making a fire in the boiler setting the water, as it became warmer would rise and, leaving the boiler, would be replaced by cooler water from the return main. The motive power in a plant of this simple design is the difference in weight between a column of hot water and a column of cold water of the same dimensions. This difference is about one grain per square inch per foot in height for each degree difference in the temperatures of the two pipes. Thus, in a building

These members of the plumbing fraternity are grouped in front of the supply establishment of Burns & Howard, at Oakland, Cal., and they will be instantly recognized by those who have visited the trade in that vicinity. Photograph by our Mr. E. De Forest Winslow.

100 feet high, with a mean difference of six degrees between the temperatures of the rising and descending water, we would have an unbalanced pressure of 600 grains or a little over one and one-third ounces per square inch to move the water. This is such a minute force as to be very easily overcome by defects in the piping.

The open tank system works with only atmospheric pressure on top of the water in the tank. As it is desirable to avoid the noise and possible injury due to the motion of boiling water, the temperature of the water at the top of such a plant would usually be kept below two hundred degrees. At the same time the pressure at the bottom of the system would be about 41 pounds per square inch. At this pressure the water could be heated to a temperature of 268 degrees before boiling, so that to equalize matters there should be a pressure of 41 pounds per square inch imposed on the top of the water. This is done by closing the tank with a safety valve set at 41 pounds. Then the water may be heated above 250 degrees without boiling and be equal in heating effect per square foot to steam at 30 pounds pressure. The slight power of the difference in the temperatures of the two columns of water is so liable to be unequal to the task of maintaining a proper circulation, that, to make sure we will put a pump somewhere in the supply or return main, where all the water will pass through it and, driving the pump by current from the street, get any desirable circulation.

With this system of piping other sources of supply may be used. Thus, the boiler may be replaced by a heater built like a closed feed water heater and heated by live or exhaust steam or both. We have seen some extensive hot water heating done by having the risers of a uniform diameter throughout and entering each riser at a point above the highest radiator a pipe which ran down inside the riser to the bottom, through which it passed. The radiators on each floor had their supply openings connected to the riser at the usual levels and the return openings connected to the same riser at points some five feet lower than the supply pipes. The pipe running down through the centre of each riser was connected to a source of exhaust steam at the top and to a vacuum return at the bottom and so a circulation of steam was kept up through the inner pipe. The radiators and the space between the inner and outer pipes was filled with water and this by the heat absorbed from the inner pipe was set in motion and entered each radiator through the ordinary opening and returned to the riser through the opening below the floor. The effect was very good, each riser being a small hot water plant using exhaust steam as a source of heat, and as the short radiator connections were all the piping between the heater and the radiators, the friction loss was small and the plant worked very well indeed. The large risers made this plant rather an expensive one to install, although the easy circulation was positive without the use of a pump.

In any heating plant, the greater the extent of radiating surface, the lower will be the temperature at which that surface can be successfully operated. Hence, if we have enough radiating surface, the temperature of the hot water may be so low that when it gets back to the heater it will be cooler than the cooling water discharged from the condensing engines. If this be the case, the return water may be sent to the cooling tower to be prepared for use as condenser water and the discharged condenser water, (at a temperature of 110 to 125 degrees), sent to the heater for further heating before being started on its travels through the radiators. Or a closed feed water heater of sufficient capacity may be used, through which will flow both the condenser water and the return water.

Coils in the Smoke Flue.

The next step may be to send the water through coils in the smoke flue to absorb heat from the flue gases. After this, if the temperature must be raised still higher, a tubular heater using live steam may finish the process and send the water to the radiators at a proper temperature. If the engines be run non-condensing, the course of the return water will be through a closed exhaust feed water heater alone, or aided by the flue gases and having a live steam connection. The pump to be used in such a plant will most profitably be a centrifugal pump directly connected to an electric motor, and if it must be run when no current is available, it may also be belted to a small steam engine. The power consumed by the pump is very little as the rising column of water balances the descending column, leaving only the friction load to be carried. The use of coils or radiators is usually determined by the taste of the architect or owner, some people thinking that coils are too ugly for use in an office building.

Coils and radiators may both be made up in the same forms as those used in two-pipe steam heating always providing top connections between sections and having the supply opening at the top. By enclosing in a box and admitting air at the bottom and permitting it to flow out at the top we make the heating indirect, but at the ordinary open tank hot

water temperatures the circulation of air is too feeble for office building work. With the pressure system this is not so. We may also erect radiators in the rooms next the outside wall and, enclosing the lower part of the radiator, connect the enclosure by a short duct running through the wall and receiving out-door air to be warmed as it rises through the radiator in the room. We term this the semi-direct system; sometimes it is called direct indirect, a contradiction of terms.

The conductivity of the coils being from five to ten per cent greater than that of radiators makes them desirable where they can be used.

How to Care for and Run a House-Heating Plant

By Phoenix.

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Now that the cool October evenings are approaching and the rooms are acquiring that chilly, uncomfortable feeling, it is time to begin to think about starting up the heating plant just enough to dry out the house and render it comfortable.

The plant should have been placed in thorough working order in the spring; but it would not be related to the heating and plumbing business if it had not been put off until the very last possible moment.

So instead of going down to the cellar and throwing in some paper and wood and starting up a fire that will probably fill the residence with smoke from cellar to attic, it is far better to go at the job, in a reasonable way and put it into proper shape.

Take half a day off on a bright, dry day and go at it with a will.

The smoke pipe should have been taken off last spring and stored away in some dry place after being thoroughly cleaned, but the chances are that it has been left on the boiler. It will be necessary, therefore, to take it off and clean out the soot inside. Do not be surprised if you find several places in the pipe so rotten that you can stick your finger through easily. In such a case just take the whole pipe down to the nearest tin shop and let them make you a new smoke pipe for, an old rusty smoke pipe mistakenly used through fancied economy has been the cause of thousands of homes burning down in this country. Be sure and clean out the chimney. One man I know thought he was dead on to an easy way to do this, so he tied three old style flatirons to the end of a long rope, and going upon the roof, let them down into a 4x12 inch flue. These irons became wedged and it was necessary to send for a mason to cut into the side of the chimney in order to remove the flatirons. The place where they lodged was just back of the parlor wall of the house, and the litter created and the remarks of the housewife can be imagined.

This little experiment cost the owner about $7 to "make good." If he had been wise enough to use a piece of well chain on the end of the rope instead of the flatirons he would have accomplished what he started out to do in cleaning the chimney very nicely. After the chimney and smoke pipe are attended to and all made right, it is time to turn your attention to putting the boiler in shape. I hope that no one has been foolish enough to daub kerosene upon the iron work, thinking that it would prevent the accumulation of rust. It will make rust every time. It's all right to remove the rust at first, but in turn should be wiped thoroughly off and the surface of the iron covered with lard oil.

Well! the next thing to do is to take the scraper and thoroughly clean all the flues, letting the soot drop down into the ash pit, from which it can be removed very easily.

After the boiler, chimney and smoke pipe have been put in shape and properly connected, **look at the water glass.** If it is not half full of water, let enough in to bring it up to that point, and then start up a quick flash fire from wood.

Put in enough fuel only to make about seven or eight pounds of steam and when you have that much blow off the boiler.

In this operation you may discover that the automatic damper or regulator is on the bum and needs fixing.

If so, make a note of it, and have the steam fitter who does your work call and fix the damper the following day.

The Efficiency of any Heating Plant will be increased at least 50% if it is kept clean.

Also let him clean out the water glass, and while the steam is up go over the job and see if the air valves are working properly, and if any of the valves need packing. If so, mark them and the fitter can attend to fixing the whole busines up properly when he calls.

Now, if you have a hot water heating plant, just draw off the water before building the fire, and then **fill up the job with fresh water**, as it will give very much better results than when run on stale water.

This hot water job should have been completely filled with water all through the summer months. The danger of the jobs rusting comes from the oxygen in the air and not from the water left standing in the pipes, boiler and radiators. Before leaving the job look over the radiators once more and see if they would not be better for being re-decorated. If so, have them painted over and **not bronzed.**

The latest and most accurate test, covering a period of several months of careful observation and an accurate account of the results being written down, have proved that all bronzes are much poorer conductors of heat than are the enamels, lead paint and zinc paint. It was likewise proved in these tests that the heating effect of the radiator was more affected by the con-

dition of the surface **than by the material through which** the heat was conducted. Therefore it appears that bronze is about the most costly form of covering iron radiators.

If you decide to have them **"done over"** give the steam fitter due notice so that he may plan ahead to that effect. In some cities, however, this form of decorating is done by painters.

The writer has been asked many times: "Mr. Phoenix, how much coal ought my heating plant to burn? It heats nine rooms," and I have always answered, "It **will destroy all the coal you can shovel through the door."**

People differ. Coal does not always run the same, and some seasons are more severe and longer than others.

One person will use ten tons of coal per season, while some other member of the family can get more heat out of the **same heating job** and use only six or seven tons of coal.

In the ordinary house heating boiler as generally installed it is far more satisfactory and economical to run a deep banked fire. If that be done it is necessary to **attend to the fire only twice in 24 hours,** because if the job is installed properly and is correctly proportioned it should carry steam for that length of time, viz.: 12 hours to a proper charge of coal.

When possible and not too far from the hard coal country it is more satisfactory to use it than to try to get along with soft coal. Put in enough fuel the first thing in the morning to run all day. Turn on the drafts and let it get well fired up and the gas burned off. Then bank the fire quite heavily with cinders, coal dust, or pea coal and close down the drafts, to the proper point. If the boiler is of the right construction the coal in the fire box at the top should be as black as the ace of spades, and yet the mains and radiators be full of steam doing duty in heating the house.

In case you say that this is not possible I wish to inform you that you have a mighty poor job and you had better call upon the nearest reliable heating expert and have him examine the job and fix it over for he **can save you many dollars which are now flying up the chimney.**

The attractive plumbing and heating establishment of H. M. Flandreau, at Avon, N. J., and some of the men who have made it a success.

Questions and Answers

This department is maintained for the use of every reader of "Domestic Engineering." We solicit problems from you and will give them our best attention. In stating your questions please give all of the facts as clearly as possible and when necessary accompany your question with a correct layout of the job.

AMOUNT OF WATER FLOWING THROUGH A PIPE.

214. Indianapolis, Ind.—To the Editor of "Domestic Engineering." Sir: Can you publish any information in regard to the amount of water which will pass through the various sizes of pipes? **B. F. G.**

In reply to this inquiry we publish the following table from "Kent's Manual," which gives the flow of water in pipes from ⅜" to 12" in diameter for a uniform velocity of 100 feet per minute.

Diameter in Inches.	Feet per Minute. Flow in Cubic Feet.	Flow in Gallons per Minute. Gallons.
⅜	0.077	.57
½	.136	1.02
¾	.307	2.30
1	.545	4.08
1¼	.852	6.38
1½	1.227	9.18
2	2.182	16 32
2½	3.41	25.50
3	4.91	36.72
4	8.73	65.28
5	13.6	102.00
6	19.6	146.88
7	26.7	199.92
8	34.9	261.12
9	44.2	330.48
10	54.5	408.00
11	66.0	493.68
12	78.5	587.52

HOW LONG DOES IT TAKE TO INSTALL A COMPLETE BATH ROOM?

218. Atlanta, Ga.—To the Editor of "Domestic Engineering." Sir: Can you give me any information regarding the length of time it takes to put in a complete bath room outfit? That is to rough in and finish the work for a closet, lavatory, tub, also sink in kitchen and range boiler properly connected. Can this be done in less time now, than in the days when all the pipe was lead and the work according? **Interested.**

This is a question that every master plumber in the land is up against every day, how much time to figure upon the job, and we are not yet aware of anybody who has figured it down to a dead sure thing, just what each job is going to pan out in regard to the amount of time it will take. Men who have been in the business for years differ in their opinion as to the speed with which the plumber can, or will, work. We have been told that a plumber (under the present way of installing bath rooms), who takes, working alone, nine days to completely install such a bathroom outfit as our correspondent mentions, would be considered dead slow, while the plumber who could do the work in seven days would be regarded as fair. One who could complete the job in six days would be called good, and the five day man would be sought after as a "cracker-jack." There are so many different perplexing problems entering into this question that any cold cut solution is almost impossible. It makes a difference whether the building be old or under construction; an element also to be considered is the proper ordering

of the supplies and getting them upon the job, and there are about one hundred or more other things which might help or hinder the man who is doing the work, that would make a difference in the amount of time consumed upon the job. In regard to the old style lead jobs, where the pipes were of lead, and many wiped joints necessary, we have had "old timers" tell us that it took all the way from eight to fifteen days to put in such a job properly. We should be very much pleased to hear from some of our readers, who can speak from experience upon this subject.

HAS THE MAIL ORDER FEVER STRUCK ARKANSAS?

217. Little Rock, Ark.—To the Editor of "Domestic Engineering." Sir: I want to build a reservoir on my place in the country here and pipe the water to the house, barn and garden. Also to the melon and celery gardens. If you can give me any information regarding the work it would be appreciated, also where I can buy galvanized piping the cheapest? **M.**

We should advise this correspondent to get in communication with at least two entirely responsible plumbing firms, and have them bid on his work.

We consider that when a man attempts to do work which does not belong to his trade that he runs every chance of getting "stung" from his very ignorance of the job he is undertaking. If a man was a successful farmer he would hardly expect some clerk in a dry goods store to be able to run his farm for him. A good mechanic will put this job in far cheaper, in the long run, than the man can do it for himself, and the mechanic, if he contracts the job, is also responsible for its success and must make good any failures at his own expense.

HOW TO MAKE A BUSHING OUT OF A PIPE COUPLING.

219. Cleveland, O.—To the Editor of "Domestic Engineering." Sir: Can you tell me how to make a "bushing" out of an ordinary pipe coupling, and greatly oblige, **Questioner.**

This can be done easily enough with an adjustable set of stocks and dies, while with a solid die the coupling will probably have to be filed down until the die will "catch."

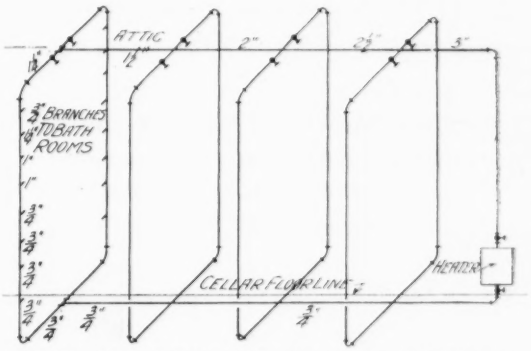
Screw the coupling firmly on a piece of pipe about one foot in length, being sure to select a strong, thick smooth coupling. Then set the dies so as to cut a very light thread the first time you run them up. It will be necessary to run over the coupling two or three times before the thread upon the outside comes down to standard. When the thread is cut properly, place the pipe wrench on that part of the coupling which has no thread and slack off the coupling a couple of turns, take the pipe out of the vise, and make the coupling into the desired fitting to stay, using the wrench upon the coupling.

Then you can back out the piece of pipe and the coupling will remain in the fitting. If it is desired to make a good looking job, take a hack saw and saw off the projecting coupling even with the face of the fitting and you will have a good hand made blind bushing that will give good service.

HOW ABOUT THE WORKING OF THIS JOB?

216. Philadelphia, Pa.—To the Editor of "Domestic Engineering." Sir: Will you kindly let me know if the sketch given of a nine story building, 100 feet high will make a good job?

We propose to take a 3-inch riser from the hot water heater to the top of the building, extending along attic as shown with verticals reducing in size, to underneath



Sketch showing lay-out of proposed runs of piping on nine-story heating job.

basement floor and connect in to one line of ¾ inch pipe and return to bottom of heater. The branches are to supply bath rooms. **G.**

Not knowing the amount of radiation which will be attached to this job we are somewhat at a loss in giving a complete answer. We are inclined to believe, however, that the ¾ inch return line would be too small and that it should be increased in size, as we consider that it would retard the flow of hot water. Also in a job of this height there would be a pressure on the lower part of the system of something between forty and fifty pounds, and it would be necessary to use care in the selection of the material going into the job and its installation.

HOW MUCH RADIATION CAN BE ADDED TO A WATER FRONT?

222. Harrisburg, Penna.—To the Editor of "Domestic Engineering." Sir: How much radiation can be added to a water back which is easily carrying a thirty gallon range boiler? It is desired to heat a room over the kitchen from this water back and I would like to get some idea of how much radiation I can use and still be upon the safe side? **In Haste.**

It has been found in different cases that when the water back works properly, it can be connected to about one additional foot of radiation for every gallon of water the range boiler holds. In other words, this water back would heat a 30-gallon range boiler and 30 square feet of radiation. This is not stated as a definite rule, as there are many conditions which might interfere with its success.

We should be glad to hear from some of our readers who can furnish information upon this subject, mentioning the sizes of range boilers, water backs and amount of radiation used successfully.

WHOLESALE PLUMBING AND HEATING NEWS

The Hunting Company builds additions to its plumbing supply houses at Rochester and Watertown, New York

American Society of Heating and Ventilating Engineers announces date and place of next annual meeting

HUNTING CO. ELECTS OFFICERS AND ENLARGES ITS ESTABLISHMENTS.

The Hunting Company, of Watertown and Rochester, N. Y., recently elected the following officers: President and general manager, S. E. Hunting; vice-president and manager, of Rochester branch, George Pierce; treasurer, succeeding the late F. D. Pierce, Lloyd Casler; secretary, State Senator Geo. H. Cobb, and assistant secretary, D. M. Kelsey. The Company has adopted a policy of aggressive expansion, among the items in evidence in that direction being the erection of an addition in the rear of its Watertown house, 30x65 feet, three stories high; the enlargement of its pipe shop, installation of additional machinery, and the extension of its heating goods department, which is in charge of Hugh Murray; also the perfecting of arrangements whereby pipe is unloaded from the cars direct into the pipe shop. At Rochester an addition to its store house on Railroad street, 38x70 feet, three stories high, is being erected, and a heating goods department added to the business, to which Mr. Devendorf, formerly in charge of construction for the Western Electric Company of New York, and Mr. Allen, who has been a popular envoy of the Rochester store since its establishment, will devote their exclusive attention.

FIX DATE FOR ANNUAL MEETING OF A. S. H. V. E.

At a meeting of the Board of Governors of the American Society of Heating and Ventilating Engineers held at the New Grand Hotel in New York City, this week, it was decided to hold the next annual meeting of the society on Tuesday, Wednesday and Thursday, January 18, 19 and 20, 1910, in New York City. There will be an afternoon and evening session on Tuesday and an afternoon session on Wednesday. The annual dinner will be held on Wednesday evening. On Thursday there will be a morning and afternoon session. A committee to nominate officers for next year was appointed, and twelve applications for membership in the society were approved at the meeting.

RECEIVER TO SELL STAPLE VALVE CO.'S ASSETS.

The Receiver of the Staples Valve Company, of Newburg, N. Y., Joseph H. Turl, has sent out notice to the effect that he will sell at public auction on October 16, 1909, at 12 o'clock noon, at the front door of the court house in that city a parcel of land at Spring, South William and Liberty streets, Newburg, N. Y., containing about one acre; three patents and five applications for patents on flushing mechanisms; also registered trade mark "Royal Flush," all belonging to the Staples Valve Company. The terms of the sale are 10 per cent of purchase price at the time of sale and the balance on or before November 1, 1909.

CHICAGO PLUMBING SUPPLY BOWLING LEAGUE.

The Chicago Plumbing Supply Bowling League is the name of a new organization which has been formed by salesmen connected with the following plumbing supply concerns in Chicago: Cameron-Schroth-Cameron Company, Davies Supply Company, Federal-Huber Company, Illinois Malleable Iron Company, Republic Mfg. Company, Weil Bros., Western Plumbing Supply Company, and L. Wolff Manufacturing Company. The league was organized by the election of the following officers: President, L. W. Rademacher, of Republic Mfg. Co.; vice-president, John Carroll, of Federal-Huber Co.; secretary, Wm. C. Faehse, of L. Wolff Mfg. Co.; treasurer, G. Woelfel, Jr., of Cameron-Schroth-Cameron Company. Final arrangement for the bowling season 1909-1910 were made Thursday evening, September 30, when it was decided to hold the bowling tournament every Thursday evening during the season at 8:30 o'clock at Schindler's Alleys, corner of Milwaukee avenue and Huron street, where ten alleys are arranged side by side and placed at the disposition of the salesmen. Excellent accommodations are also provided here for visitors who will receive a cordial welcome from the salesmen. The league consists of eight five-men teams, each representing one of the above-mentioned plumbing supply houses. The opening event will take place Thursday evening, October 14, and tournaments will be held weekly until March 21, 1910.

SAN FRANCISCO JOBBERS IN PLUMBING SUPPLIES REPORT BUSINESS NORMAL ONCE MORE.

While quiet times are reported in the plumbing business at San Francisco, Cal., those of the wholesale dealers in plumbing supplies who have records to show of the business done before the fire assert that business now compares very favorably with the business done then, and some of them even go so far as to say that they are now doing more business than formerly. It is natural that individual receipts should be less than then for it is to be noted that there are now more firms in the supply business. As far as immediate and pressing needs are concerned San Francisco may be regarded as being rebuilt, for while there is still a considerable burnt area yet unoccupied by buildings, the size of those that have been constructed makes up largely for this fact. Then, too, San Francisco has grown largely on the outskirts and the work of the

past three years can be seen in part only by the average visitor. A prominent dealer in speaking of general conditions, says: "There is much activity throughout the interior of California. Dried fruit finds a ready market. Grain and hay harvests have been abundant and the prices have never been better. To the north the lumber industry is flourishing as never before, and every other line of industry is thoroughly active. It may be said that we now have no unemployed. The present superb appearance of San Francisco simply astonished everyone. It is the one topic of favorable discussion throughout the East. One who lives there today cannot possibly realize the tremendous advancement that San Francisco makes and one has to get away for a period to have impressed upon him forcibly the magnificent and unprecedented progress that San Francisco is making. The Portola Festival has been well advertised and will be made the occasion for a general flocking of people into San Francisco, not only from adjacent cities, but from all over the country. The rebuilding work that has been done will be a revelation to them and in the general praise that will be accorded the builders of the city the plumbing trade will have a full share for the difficulties of sanitation that were overcome in the days following the fire and the superb work done by plumbers are matters with which the world has been acquainted and has marveled at."

NOW IN THE HUDSON TERMINAL.

H. W. Letcher, manufacturer's agent, has moved his office to the Hudson Terminal building, 50 Church street, New York.

BUILDING NEW PLANT.

The Anchor Stone Company, manufacturers of laundry trays at Minneapolis, Minn., is building a new plant, 40x113 feet, which they state will materially increase their capacity.

WILL SOON MOVE INTO NEW FACTORY.

Rollyn Hawkins Company, manufacturer of heating specialties, at Indianapolis, Ind., will move into its new factory at 928-930 East Maryland street, in that city, about the middle of October.

NOW MAKING PLUMBERS' BRASS GOODS.

H. B. Sherman Mfg. Co., of Battle Creek, Mich., has recently increased its facilities for the purpose of manufacturing a line of plumbers' brass goods, several appliances of which are now on the market.

NOW LOCATED IN NEW PLANT.

J. P. Danielson & Co. of Jamestown, N. Y., manufacturers of pliers, drop forgings, etc., have recently moved into their handsome new manufacturing building of brick construction, 50x95 feet, two stories high and very completely equipped.

REPORTS BUSINESS EXCELLENT.

American Thermostat Company, of Elmira, N. Y., reports that it has done more business the first nine months of this year, than it did during the entire year of 1908. The Company is at the present time working two shifts in its factory, and its prospects are exceedingly bright.

NOW WITH THE WRIGHT AND AUSTIN COMPANIES.

C. A. Poe has disposed of his business interests in Pittsburg, Pa., and accepted a position with the Wright Manufacturing Company and the Austin Separator Company, of Detroit, to be in charge of the mechanical department of these companies, succeeding the late H. H. Humphrey.

VOLLRATHS START WORK ON NEW PLANT.

The J. J. Vollrath Manufacturing Co., has started active work on its new plant on the North-Western belt line, Sheboygan, Wis. Foundations will be completed before winter and the superstructure will be erected next spring. There will be several large buildings, of fireproof construction and modern in every way.

One of the floats in the parade last winter at the Mardi Gras in New Orleans, La., a show which was greatly enjoyed by the guests of the Columbus Brass Company, of Columbus, O., among which were many master plumbers from Ohio and adjacent states. This complimentary trip was such a splendid and pleasant success that the company has decided to give its customers another trip to New Orleans next year at the time of the Mardi Gras, February 20-26, 1910.

BUILD LARGE ADDITION TO NEW PLANT.

The Warner & Swasey Company, of Cleveland, O., has commenced the erection of large additions to its new plant. The buildings are of the single story type, of steel and concrete construction, and they will be equipped with electric cranes and other modern appliances. It is planned to have the new additions completed by December 1, 1909.

WHO MAKES A SEAMLESS STEEL LAVATORY BASIN?

We have had an inquiry for the name and address of a manufacturer of seamless steel lavatory basins, and we will be glad to receive from our readers this information.

IRON AND STEEL TRADES SHOW CONTINUED ACTIVITY

Manufacturers, position in regard to copper, as shown in the past few weeks, seems to be conservative

St. Louis lead market reported stronger and firmer

FUTURE COPPER PRODUCTION.

Authorities in the metal trades point out that Amalgamated Copper does not occupy so strong a position with reference to its competitors as does United States Steel. They say that new copper producers are undoubtedly getting metal at a lower cost than Amalgamated. They point particularly to the great Nevada Consolidated and Utah mines. They also forecast large additions to present output from the Ray Consolidated and Miami properties in Arizona. It is also claimed that lake mines produce cheaper than their great competitor. During August manufacturers have shown a cautious and even conservative attitude toward copper. Statistically the copper situation has not improved. To be sure the good, healthy demand for copper which has prevailed for several months characterized August as well, but the present unprecedented output from the copper refiners is unsettling the market and is creating a depressive feeling among buyers. August production from all sources of 120,597,231 pounds exceeded all records. American refineries produced at the annual rate of 1,447,166,808 pounds. This is more than double the estimated United States consumption. It is not a matter of wonder that the market does not get back to a good basis.

IRON AND STEEL DEMANDS ACTIVE.

Chicago, Ill.—It is reported that for 1910 additional sales of steel rails have been made during the past week, some 200,000 tons having been placed by the Pennsylvania. Some falling off has been noticed in the structural business and the outlook for new work could be more promising. The remarkable activity of the mills and furnaces which for several months past has continued with an increasing production, seems liable to continue in spite of the comparatively light buying upon the part of the railroads. In certain sections the movement of ore is delayed by a shortage of cars, which might tend to produce results which would interefere somewhat with prompt deliveries.

IN THE PIG IRON MARKET.

Chicago, Ill.—The total sales of Bessemer pig iron reported for the month of September up to the 23d, according to the American metal market, have slightly exceeded 150,000 tons, but 31,500 tons of the total was iron bought by merchant furnace interests, to apply on their own sales and 15,000 tons was an increase to a contract which is based on the average market price. The sales of Bessemer iron in large blocks to consuming interests at flat prices have totaled about 100,000 tons. Besides this, the Lackawanna Steel Company made a conversion deal with the Buffalo Union Furnace Company for 25,000 tons of Bessemer, giving the necessary ore, the iron to be made in first quarter or sooner. Counting everything up one might make out transactions involving Bessemer pig iron exceeding 175,000 tons in just a trifle over three weeks. The largest business actually closed was the 25,000 tons from the Bessemer Furnace Association to the Youngstown Sheet & Tube Company, at $18, furnace, for first quarter. The consumer originally inquired for fourth quarter delivery but the furnaces could not find the iron and a compromise was made on first quarter at $18.00.

LEAD MARKET VERY QUIET.

Chicago, Ill.—Reports from St. Louis indicate that the lead market there is stronger than the previous week, but in the eastern section of the country matters continue unchanged. The report comes from abroad, that there has been an advance of ten shillings a ton, which is regarded as a large fluctuation for lead in the London market.

NEW YORK METAL MARKET, SEPTEMBER 28.

Copper, Prime, Lake	$13.10-13.15
Copper, Electrolytic	13.00
Antimony, Cookson's	8.50
Lead	4.37½- 4.40
Straits, Tin	30.85
Spelter	5.85- 5.90

CHICAGO IRON MARKET, SEPTEMBER 30.

Southern, No. 2 Foundry	$ 18.85
Northern, No. 2 Foundry	19.00
Lake Superior Charcoal	19.50-20.00

September 30, 1909.

Foundry Iron was same as week previous
$1.85 more per ton than the year previous
Copper 1/5c less per lb. than the month previous
1/5c less per lb. than the year previous

NEW YORK OLD METAL MARKET.

New York.—Dealers' buying prices are as follows:

Heavy crucibled copper	11.62½ to	12.12½
Heavy copper wire	11.25	11.50
Light copper	10.00	10.50
Uncrucibled h'y copper	11.25	11.50
Plumbers' cocks and faucets	9.25	9.50
Heavy brass	8.25	8.50
Light brass	6.25	6.50
Solder joints	6.50	6.75
Heavy lead	4.00	4.10

CHICAGO OLD METAL MARKET.

Chicago, Ill.—Dealers' buying prices are as follows:

Clean heavy copper and trolly wire	11.50	11.62½
Light copper		10.50
Heavy yellow brass		8.25
Light brass		6.25
Heavy lead		3.90
Tea lead		3.50
Scrap zinc		4.00

OBITUARY

R. B. Moodie, formerly President of the National Association of Master Plumbers, passes on at his home in Dayton, O.

R. B. Moodie, formerly president of the National Association of Master Plumbers, and member of the plumbing firm of Ware & Moodie, of Dayton, O., passed on suddenly at his home in that city on Tuesday, September 28, from heart failure. This sad news will come as a great shock to his friends in all parts of the country, many of whom met him at the recent national convention in Detroit, where he seemingly was enjoying good health. Mr. Moodie was born in Dayton, O., January 27, 1853, and received a public school and high school education in that city. He entered into the plumbing business for himself in 1890, after having served a somewhat varied but interesting and profitable apprenticeship. Early in his independent business career he took an interest in association work. He was one of the moving spirits in the local organization. He always was an interested participant in the work of the state association's conventions and did not fail on such occasions to forecast the high promises and possibilities of a national organization. He was an enthusiastic and conscientious supporter of the principles set forth in Article IV of the By-laws of the National Association, defining the higher purposes to be attained through complete organization. Among these noble objects he always emphasized "the advancement of sanitation and the encouragement of sanitary laws and the better enforcement thereof." To this and other exalted ends he always stood for "the establishment of harmonious and equitable relations between master plumbers, journeyman plumbers and other employes," also "for the education of the apprentice in plumbing and the establishment of an apprenticeship system, and for the collection of just debts." Mr. Moodie's early church training was of a character to direct his attention when but an apprentice to sound moral principles as not only essential to the well-being of society, but indispensable to success in a business career. He always took pride in belonging to the vast army of artisans, never failing to realize the serious responsibility that rests upon men of his class and profession. "The men," said he some time ago to the writer, "who think that the strength of organization lies not so much in mere force as in character, are the men who, after all, control the destinies of society." He never forgot his own apprenticeship and was, therefore, at all times mindful of the God-given rights of those who toil. He was for many years a molder of sentiment in his community in this line of character discipline. Though not an active seeker for the honor conferred on him by the National Association of Master Plumbers at its convention at Atlantic City, N. J., in 1906, he was chosen president by acclamation. In this instance the office sought the man—not the man the office. Mr. Moodie had a high reputation as a business man in Dayton, and the plumbing establishment of Ware & Moodie, located at 128 South Jefferson street, near the center of the business in that city, has an enviable clientele. He was a prominent member of the First Presbyterian church in his native city, and his standing both as a churchman and as a citizen enabled him to attain the success which made him a conspicuous figure both in his own city and in the National Association of Master Plumbers. He is survived by his wife and a daughter, Mrs. D. W. Yarbrough, whose husband is one of the leading master plumbers at Atlanta, Ga.

PERSONAL MENTION

David Williams became connected with "The Iron Age," of New York City, 54 years ago. The paper was established in 1855 by John Williams, his father. Since David Williams has been at its head it has become the most important journal in the heavy iron and hardware field, and is a recognized authority on those markets. The company of which David Williams has for so many years been the head also publish "The Metal Worker." It is an event of considerable importance to have David Williams relinquish control of "The Iron Age" and "The Metal Worker" and retire from trade journalism. For some time negotiations have been pending for the purchase of his interests, and these were consummated last week and the control of this immense newspaper property passed into new hands. While the consideration is a matter of knowledge only between the principals, the gossip in newspaper circles is that the price was a million and a half dollars; certain it is that the amount paid is a striking testimony to the value of an honestly conducted trade newspaper property. All trade journalists honor David Williams and he is worthy all the honor accorded him. We congratulate him upon his retirement after many years valuable service to the trade he was identified with. His contributions have been of incalculable advantage to those who are engaged in it, because he has always preached and practiced uprightness, industry and integrity. The world is better be-

Scene at the Mardi Gras at New Orleans, La., last winter. A large number of the guests of the Columbus Brass Company, Columbus, Ohio, may be seen in the foreground of the picture, among them many prominent master plumbers from Ohio, who enjoyed this complimentary trip very much.

cause of what he has done. The purchasers of Mr. Williams' interests are Charles T. Root and W. H. Taylor. Mr. Root is actively identified with many adventures in trade journalism owned by the Root Newspaper Association, the more important publications being "The Dry Goods Economist," of New York, and "The Boot and Shoe Recorder," of Boston. He is a high-minded gentleman of wide culture and will carry out the highest ideals of trade journalists. He becomes president of the David Williams Company. His associate in the purchase is W. H. Taylor, formerly publisher of "The Engineer" in Chicago, which was some years ago sold to and incorporated with "Power," of New York. Mr. Taylor has had a wide and profitable experience in trade journalism and his re-entry into active connection with the work is welcomed. He becomes the secretary and treasurer of the company. The editorial staff of "The Iron Age" is unchanged, Charles Kirchhoff, George W. Cope and A. I. Findley remaining as editors and Richard R. Williams as hardware editor. On "The Metal Worker" the editorial staff is W. W. Macon and Frank K. Chew.

J. C. Chalke, formerly with Fruin & Farrell, New York, is now identified with Story & Beach, 150 Nassau street, New York, in the capacity of salesman.

Fred N. Potter, plumbing inspector in Syracuse, N. Y., was married last week to Miss Frances Loomis, of Cicero, N. Y., and he is at present on a wedding trip.

Gustavus J. Johnson, metallurgist for the Raymond Lead Company, of Chicago, has severed his connection with this concern and accepted a similar position with the Storage Battery **Lighting Company, of 9 Jackson boulevard, Chicago. Mr. Johnson is a member of the** American Society of Inspectors of Plumbing and Sanitary Engineers.

MR. MYLER WINS A CUP.

W. A. Myler, secretary and treasurer of the Standard Sanitary Mfg. Co., of Pittsburg, Pa., is president of the Beaver Valley Country Club, located on Patterson Heights, in Beaver County, Pa. This year the membership of the Club was divided into groups of eight players, according to their skill, and a handsome cup was put up for the best player in each eight, and this cup for the second eight has been won by Mr. Myler. His golfing friends will no doubt desire to congratulate him upon his success.

ASSOCIATION NEWS

WASHINGTON STATE ASSOCIATION OF MASTER PLUMBERS HOLD ANNUAL CONVENTION.

Seattle, Wash.—The Washington State Association of Master Plumbers held its annual convention at the Rainier hall in this city Monday and Tuesday, September 20 and 21, and transacted routine business. State President James Smyth, of Spokane, presided at the convention. At the closing session on Tuesday morning, the following officers were unanimously elected for the ensuing year:

President, A. M. Goddard, of Tacoma.
Vice-president, J. C. Smyth, of Aberdeen.
Secretary, James Greggs, of Tacoma.
Treasurer, E. V. Lambert, of Spokane.

Executive Committee: James Smyth, of Spokane; W. F. Eckert, of Seattle; T. H. Bellingham, of Tacoma; C. H. Healy, of Everett, and W. S. Spinning, of Walla Walla.

Delegates to the next national convention, which is to be held in Chicago: A. M. Goddard, C. H. Healy and T. H. Bellingham.

The next state convention will be held at Tacoma, which was the unanimous choice of the convention.

The convention adjourned about noon and the delegates and their families went at once to the exposition, where the afternoon and the evening were spent.

EXECUTIVE COMMITTEE TO MEET AT BUFFALO.

New York, N. Y.—A meeting of the executive committee of the New York State association of Master Plumbers will be held in Buffalo on Thursday, October 7.

PLUMBERS ENJOY SHORE DINNER.

New Haven, Conn.—The New Haven Master Plumbers' Association went on an outing at Morris Cove on September 18th, and enjoyed a first-class shore dinner at the Shoreham hotel. Before the dinner the members engaged in a base ball match in which the Lightweights defeated the Heavyweights 4 to 3.

WILL MEET IN YOUNGSTOWN, OHIO.

Cleveland, O.—The Ohio State Association of Master Plumbers will hold its next annual convention at Youngstown, Ohio, some time in February, 1910, and not in Cleveland as was erroneously reported in this column last week. Secretary-Treasurer Eb Ellen states that the Board of Directors has decided to accept the invitation of the Mahoning Valley Association to meet in Youngstown.

PLUMBING LEGISLATION

JUDGE DECIDES THAT ANYBODY CAN DO PLUMBING IN HIS OWN HOUSE.

Boston, Mass.—Sept. 29. [Special.] Judge Burke rendered a decision in the city court to-day, which will no doubt have far reaching consequences in the plumbing trade in the future. He decided that **any man can do plumbing in his own building without a license, provided he does it according to plumbing regulations and in a manner to pass inspection.** The case was a suit brought by the city of Boston against the owners of the American House on Hanover street. When pipes and valves needed fixing at the American House, instead of sending for a licensed plumber, an expert engineer was detailed to repair the damage. City inspectors objected on the ground that only a licensed man could do the work. The owners held out and it was left for the court to decide. Judge Burke maintained there is a difference between the man who works on his own premises and the man who seeks business and does work on other premises. The law holds that, in the latter instance, the man doing the work shall be licensed. It was claimed in the hearing of this case that lots of trouble to house owners and hotel keepers has been caused by having to wait for and hire licensed

plumbers to do work which could be done as well by men equipped with the necessary knowledge in their own employ on their own premises and this is now permitted by this decision.

[The Attorney-General of the State of Illinois expressed a similar opinion in an analogous case at Aurora, Ill., in 1907.]

CINCINNATI PLUMBING LAW VALID.

Cincinnati, O.—Judge Bode upheld the plumbing ordinance last week when he fined a master plumber and a journeyman plumber for working at their trade without first securing a license. The master plumber had to pay $10 and costs and the journeyman $5 and costs.

PLUMBERS OBJECT TO NEW ORDINANCE.

Aurora, Ill.—An ordinance to conform with the new amendment to the state plumbing law passed by the Illinois legislature last May, compelling master plumbers to pay $50 when examined and $10 a year thereafter was voted down by the city council last week. Local plumbers are opposed to the bill and have asked the council to wait until it is positively known that the law will be enforced by the state. The ordinance will probably be brought up for passage at a future meeting of the city council.

PLUMBING INSPECTION

WANT PLUMBERS TO SECURE LICENSES.

Boston, Mass.—The police at the solicitation of the building department are resuming the crusade against North End plumbers who are doing business without a license. Several have already been arraigned in the police court.

PLUMBING EXAMINATION AT SPRINGFIELD.

Springfield, Mass.—Twenty-two men took the plumbers' examinations when the new state board visited here a few days ago. The tests consisted of written papers on the technical side of plumbers' work and in actual shop work in plumbing. The next examination in Springfield will be held on February 19, 1910.

H. B. DAVIS SUBMITS INTERESTING REPORT.

Washington, D. C.—In the twenty-seventh annual report of the work accomplished by the plumbing department of the District of Columbia for the fiscal year ending June 30, 1909, submitted recently to the Commissioners, as one of the last official acts of Henry B. Davis, then Inspector of Plumbing, it is shown that the field force of assistants made 39,404 inspections, being an increase of nearly 10,000 over the previous year. A strong plea is made for an increase in the pay of the men who are now getting but $1,000 each for five, and $1,200 for one. The complaints examined numbered 2,657, which included those of all kinds. The use of Merck's aniline dye for testing leaking sewers was again used during the year with great success. A decrease in the number of cases taken to court is noted, in that but 35 were handled this year over that of the previous fiscal year. The entire appropriation of $50,000 for repairing plumbing in existing school buildings was used up by the complete remodelling of the plumbing in eleven schools, and work of a preliminary character in ten others. Mr. Davis has recommended that a badge of uniform design be used for the inspectors of all departments except those of the Fire and Police Departments, and he also suggests that the inspectors of his office be invested with police authority, so that violators of the law in reference to plumbing work may be more readily caught. It is announced that a new set of plumbing and gas fitting regulations are being worked out, and that it is expected that they will be ready for submission to the Commissioners in perhaps six or eight months. The **two public comfort stations have proved very popular** during the last year, there having been an attendance of 2,232,584, and the cost of operating them being about $6,700. There are to be three built within the next year, and a recommendation is made in the report for the construction of two others making a total of seven for the city. **Public baths and baths in school buildings** come in for a lengthy argument of support, as well as a number of suggestions for the improvement of the present bathing beach.

A. R. M'GONEGAL, TEMPORARY PLUMBING INSPECTOR.

Washington, D. C.—The position of inspector of plumbing of the District of Columbia has been temporarily filled by the appointment of Alfred R. McGonegal, Sanitary Engineer, and an assistant inspector of plumbing, for the four month furlough granted Mr. Henry B. Davis. Mr. McGonegal is very widely known as an expert on sanitation and ventilation, and has planned the plumbing, heating and ventilating systems of many prominent buildings in this city as well as out of town. He is a charter member of the American Society of Inspectors of Plumbing and Sanitary Engineers and a member of the Test Committee of that Society. The position carries with it a salary of $2,000 a year.

New York, N. Y.—A petition in bankruptcy has been filed against the Engineering Specialty Company, of 81 Nassau street. The company was incorporated under the laws of the State of New York in December, 1905, with a capital stock of $100,000, and has a factory at Stamford, Conn., on which a mortgage of $29,500 was given in September, 1908.

The up-to-date display window of V. S. Teegerstrom's plumbing and heating establishment at Kane, Pa. Mr. Teegerstrom and Miss Anderson, his bookkeeper and stenographer, are seen standing in front of the establishment.

MIDDLE STATES

Rockford, Ill.—William Dwyer has been awarded the contract for the installation of a heating plant in the Hamilton home on North Second street.

St. Joseph, Mich.—John Habel has secured the contract for the installation of a hot water heating system in the Melchart residence, near Royalton.

Toledo, O.—The Collingwood Plumbing and Heating Company has succeeded to the business formerly conducted by Da So Brothers, at 2507 Collingwood avenue.

Benton Harbor, Mich.—Hume & Larson, of this town, have secured the contract for the installation of a plumbing system in Mr. Heidburger's residence at Paw Paw Lake.

Chicago, Ill.—Fred Seip, of 210 92nd avenue, has secured the contract for the installation of the plumbing system at the new bungalow, which is being erected for O. H. Hicks at Windsor Park.

Decatur, Ill.—E. L. Harris & Company, of this city, has been incorporated with a capital of $10,000 to take over the plumbing business of Harris & Venters at 352 North Main street. The incorporators are S. A. Wilson, E. L. Harris and H. L. Harris.

Chicago, Ill.—Thos. J. Douglass & Company have been incorporated with a capital of $10,000 to do a general plumbing contracting business. The incorporators are Thomas J. Douglass, Andrew J. Ryan and James G. Condon.

NOTES FROM THE WEST

Mena, Ark.—It is planned to add several large extensions to the waterworks system here.

Peru, Neb.—This village is planning the construction of a water works system to cost about $15,000.

Paragould, Ark.—This city is planning several additions and improvements to its water works system.

Pittsburg, Kan.—Hartzell & Shont, of this city, have been awarded the contract for plumbing H. A. Lanyon's residence.

Valley, Neb.—This city has voted to issue bonds to the amount of $17,000 for the construction of a water works system.

Wakeeney, Kansas.—This city has engaged Geo. K. Taylor, of Stockton, Kan., as the engineer to prepare plans for the construction of a $30,000 water works system.

Austin, Tex.—Donnelly & White have been awarded the contract for the plumbing and heating in the new heating and power plant which is to be erected at the University in this city.

Cedar Rapids, Iowa.—Bartlett & King are now ready to receive bids for the plumbing, heating and electric wiring in the six-story fire-proof office building, which they are erecting in this city.

Kansas City, Mo.—The Campbell Heating Company, of this city, has secured the contracts for the installation of heating and ventilating systems in the West Harris and the Fort Cancho school buildings at San Angelo, Texas.

NEWS FROM PENNSYLVANIA

New Castle, Pa.—Bryson Plumbing Company is finishing the plumbing contract in S. P. Smith's new $5,000 residence on Wallace avenue.

New Castle, Pa.—The Gross Plumbing Company is doing the plumbing work in the new house being erected on Lindle street by J. Greer & Son.

Steelton, Pa.—Urial K. Dunn, of 22 Adams street, has been awarded the contract for the plumbing of S. B. Curran's new residence at Camp Hill, Pa.

Huntingdon, Pa.—R. Allison Miller, of this city, has secured the contract for the plumbing and heating in I. N. Snoop's new residence. The consideration is $1,100.

New Castle, Pa.—W. H. Shaddick is to remodel the hot water heating system in the Avenue Hotel. He has also secured a contract for plumbing the country residence of J. Davies at Mount Jackson, Pa.

Gallitzin, Pa.—Brannen Bros. have been awarded the contract for the plumbing and heating in Professor R. H. Beiter's new residence, and the contract for a hot water heating system in P. S. Titler's residence.

Hazelton, Pa.—The Ideal Heating Company, of this city, has been awarded the contract for the installation of a hot water heating system in a fine residence at Williamsport, Pa., also the installation of a steam heating system in a hotel building at Catawissa, Pa.

Erie, Pa.—J. H. Shilby & Co., of 238 East 11th street, have been awarded the contract for the plumbing in three new houses being erected for E. E. Austin at Fifth and Ash streets; also in a new house for Mr. Moon on West 22nd street, and two new houses at 28th and State streets for John Jordan.

Washington, Pa.—Foley Bros., of this city, have received the contract for the plumbing system for the handsome new addition that is being built to the Baptist church and parsonage here. They have also been awarded the contracts for the plumbing in several new residences and are being kept very busy.

Bradford, Pa.—The contract for the plumbing system for the new $12,000 residence that is being built here for Robert George has been awarded to C. F. Longfellow, of this city. It will contain two well equipped bath rooms. Mr. George also has been awarded the contracts for plumbing three other residences that are being built here.

Reading, Pa.—P. O. Keppelmann, of 628 North Front street, has been awarded the contract for plumbing and heating four new houses being erected at Womelsdorf, Pa., for A. S. Wartheft; consideration, $1,200. He also has secured the contract for plumbing S. F. Blatt's four new houses in this city and the remodeling of the plumbing system in the residence of F. P. Schwartz. It is expected that these contracts, with the regular run of jobbing work, will keep Mr. Keppelmann very busy for some time to come.

Wilkinsburg, Pa.—The Baker-Smith Company, Frick building, Pittsburg, has received the contract for the steam heating and ventilating systems that will be installed in the magnificent new high school that is being

built here, and which will cost over $500,000. The contract is one of the largest and most important that has been awarded in the vicinity of Pittsburg this summer. The contract for the plumbing system for the building has not been awarded, but will be announced in the course of the next few weeks. It will be a large and important one, calling for about two hundred high class fixtures, and will amount to about $30,000. Bids are now being received for the plumbing.

PITTSBURGH AND VICINITY

Reading, Pa.—E. J. Cake has moved his plumbing establishment from 146 North Fifth street to 440 Washington street.

Pittsburg, Pa.—The Oakland Plumbing Co. is installing plumbing in ten buildings in Allegheny, Pa., for W. A. McDonald.

Pittsburg, Pa.—J. J. Reilly, of 5141 Butler street, is doing the plumbing in the new residence being erected by Darty and Bokermann in Aspinwall.

Pittsburg, Pa.—W. D. Larkins has recently contracted for complete plumbing in three houses on Melwood avenue, owned by Mrs. Snyder.

Pittsburg, Pa.—Wm. Dolan, of 2301 Forbes street, has recently secured the plumbing work for the new residence being erected by Paul Kohler on Lydia street.

Pittsburg, Pa.—E. W. Rau, of 4782 Liberty avenue, is installing complete plumbing systems in the two new houses being erected by Dr. R. L. Taylor on Warren street.

Pittsburg, Pa.—S. W. Hare & Co., of 5124 Liberty avenue, is doing the plumbing and gas fitting in the new residence being built by S. C. Jamison on Darlington road.

Pittsburg, Pa.—C. A. Bruce, of 522 Second avenue, has secured the plumbing work for the three four-story warehouse buildings being erected on First avenue by the O'Hara estate.

Pittsburg, Pa.—J. J. Coates, of 36 Carver street, is installing plumbing and a hot-water heating system in a new residence for E. Guder on Campania street. He has several other good plumbing jobs under way.

Pittsburg, Pa.—Kress Plumbing Co., of 4779 Liberty avenue, is installing seven complete bathroom outfits in the Wefing flat building on Ivy street. This company also has the plumbing and hot water heating work in the G. T. Clarkson building on Shady avenue.

Pittsburg, Pa.—J. F. Matter & Co., of 118 Oakland avenue, is doing the plumbing in the new business block and office building at the corner of Oakland avenue and Forbes street. The John Dimling contract, consisting of the plumbing and gas fitting in seven houses on Boquet street, is also being done by J. F. Matter & Co.

Pittsburg, Pa.—E. W. Hesser is getting his share of the business in the East End this season. He is installing the plumbing work in the new three-story flat building at Breed's Hill and Rebecca street. There will be five complete bath rooms, costing in the neighborhood of $2,000. His contract in the Hugus Apartment No. 2 is ready for fixture setting.

SOUTHERN NOTES

Newport, Vt.—John S. Pike has been awarded the contract for the installation of a steam heating system in Philip I. Clark's residence.

Russellville, Ala.—Geo. K. Armes and Geo. H. Thornton have been granted a franchise by this city to construct a water works system here.

Urbana, Va.—The Urbana Water Company has been incorporated with a capital of $5,000. R. H. Milligan is at the head of the new enterprise.

Statesville, Miss.—K. A. Kramer, of Magnolia, Miss., is having plans prepared for the construction of a $40,000 water works system here.

Richmond, Va.—The Southern Plumbing and Electric Company has secured the contract for the construction of a sewerage system at Woodland Heights.

Nashville, Tenn.—T. J. Mooney & Company, of 142 Eighth avenue, has been awarded the contract for plumbing and heating the new Y. M. C. A. building.

Louisville, Ky.—F. A. Clegg & Co., of this city, has been awarded the contract for the installation of a heating plant in the Avery Mfg. Co.'s plant. The contract calls for the Van Auken vacuum system and 40,000 square feet of radiation.

Frederick, Md.—N. J. Wilson & Son, of 28 East Patrick street, have recently secured the following contracts: Steam heating systems in Louis Otte's hotel and T. B. Johnson's residence; a water heating system in G. L. Gaking Co.'s bakery; steam heating systems in A. Wooten's storeroom and warehouse at Poolesville,

"All the Way from the Land of Show Me." This Peerless car was always at their disposal during the recent Detroit convention. Do you know them? They are certainly E. T. Blake, general secretary of the St. Louis Association of Master Plumbers, and Henry Moore, a prominent delegate from that organization. Photograph by our Mr. Winslow.

Md.; L. A. Chiswell & Bro's. warehouse at Dickerson, Md.; Thos. Chiswell's residence at Dickerson, Md. This firm also has the contract for the installation of a plumbing system in G. D. Jones's residence in Dickerson, Md.

Norfolk, Va.—Wilson & Company has secured the contract for the plumbing in sixty new houses which are in course of construction. The plumbing firm of Thornton & Williams is very busy, and L. Kelly & Co., plumbing contractors, have all they can do at the present time.

Staunton, Va.—Virginia Plumbing & Lighting Company, of 16 Whitmore bldg., has been awarded the contract for the installation of plumbing and heating systems in Alex Carter's new residence at Marshall, Va. The contract calls for a Broomell vapor heating system. The consideration is $1,185.

BOSTON AND NEW ENGLAND

Caryville, Mass.—Clinton Howe, of West Medway is installing a steam heating plant in the residence of Henry Spear.

Taunton, Mass.—The city government has appropriated $1,000 to be expended for installing a new heating system in the city hall.

Marlboro, Mass.—Carl I. Frye has the contract for plumbing in the new Frye apartment block, at the corner of Lincoln and Winthrop streets.

Danielson, Conn.—Proposals for the installation of new steam heating plants in the public schools at Dayville and Attawaugan are being considered by the school committee and the contracts will be awarded shortly.

Cheshire, Conn.—Sidney V. Hole, of Waterbury, has purchased the plumbing business of Heineman & Johnson. Mr. Johnson will remain with the new proprietor for the present.

Thompsonville, Conn.—The committee in charge of building the addition to the North school have decided to award the contract for the heating, ventilating and plumbing facilities to Fuller-Warren Co., of Boston, provided no entanglements arise.

Fort Fairfield, Me.—The L. K. Cary Company has been given the contract for installing a steam heating plant in Memorial Hall block and work upon it will be started shortly. T. E. Hacker's store and Memorial Hall itself will be heated by the new system.

Barre, Vt.—The school commissioners have awarded the contract for the plumbing, heating and ventilating work in the new Gospel Village school building to N. D. Phelps & Co., for $3,159. The only other bidders were C. W. Averill & Co., whose bid was $3,185.

North Brookfield, Mass.—Willard B. Wilson is soon to open a plumbing, heating and stove establishment in the store formerly occupied by Charles H. Deyo, which is now being thoroughly renovated. Mr. Wilson has had extended experience in all lines of the work which he will handle.

Meriden, Conn.—The contract for installing the heating system in the addition recently built at the Franklin street school has been awarded to Taylor & Taylor, of Church street. The contract calls for the installation of a large boiler and the use of the direct radiation system. The radiators will be placed under the windows. Taylor & Taylor also have several large contracts in hand. They are just completing the installation of new sanitary arrangements in the Columbia street school and have a contract for the plumbing in Meriden Electric Light Co.'s new building on South Colony street.

GOVERNMENT WORK

Washington, D. C.—Sealed proposals will be received at the office of Supervising Architect, James Knox Taylor, until 3 o'clock p. m., November 4, 1909, for the construction (including plumbing, gas piping, heating apparatus, electric conduits and wiring) of the U. S. Post Office at North Adams, Mass., in accordance with drawings and specification.

Washington, D. C.—Sealed proposals will be received at the office of Supervising Architect James Knox Taylor until 3 o'clock p. m., November 3, 1909, for the construction (including plumbing, gas piping, heating apparatus, electric conduits and wiring and standard clock system) of the U. S. Post Office and Court House building at Albany, Georgia, in accordance with the drawings and specifications.

Master plumbers and master steam-fitters are earnestly requested to send us reports of the award of plumbing and heating contracts of $1,000 or more, as soon as these have been awarded, while the information has news value. Kindly address: Editor "Domestic Engineering," 209-213 N. Jefferson street, Chicago.

BLANK FOR REPORT

—OF—

Awards of Heating or Plumbing Contracts

(Cut out, fill in and mail promptly)

DOMESTIC ENGINEERING
Chicago

We have been awarded the

Plumbing Contract_____

Heating Contract_____

Kind of Building_____

Amount of Contract_____

Owner's Name_____

Architect's Name_____

Address_____

Our Own Name_____

Address_____

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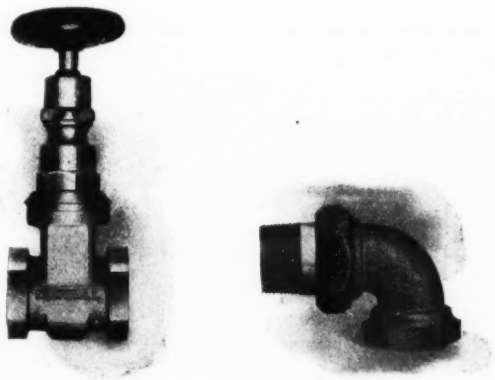

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Pittsburg	Buffalo	Indianapolis	Kansas City	Omaha	San Francisco
Washington					

PACIFIC COAST

Eureka, Cal.—A. V. Will has secured the contract for installing the oil burning heating plant in the City Hall.

Oakland, Cal.—Local plumbers are figuring on the work in the Bankers' Hotel building that is to be erected here.

Stockton, Cal.—Brandt Bros. have moved their plumbing and hardware business from 208 South San Joaquin street to 9-11 Eldorado street.

San Leandro, Cal.—Bids are being invited for the installation of a heating, ventilating and vacuum cleaning system in the public school building in this town.

Reno, Nev.—B. M. Lewis & Company, of this city, has been awarded the contract for the plumbing in the new Grammar school building at Elko, Nev. The consideration is $2,500.

Los Angeles, Cal.—E. D. Hough, of this city, has secured the contract for the installation of a heating system in Hotel Nevada, at Los Vegas, Nev., and in Hotel Palomares, at Pomona, Cal.

Los Angeles, Cal.—Eugene Murry, of 1840 East First street, has secured the contract for the installation of a steam heating system in the Union Labor Temple in this city. The contract amounts to $5,800.

Los Angeles, Cal.—The Thomas Haverty Company, of 517 Los Angeles street, has been awarded the contract for the plumbing and steam heating systems in the Utah Hotel Co.'s new hotel, at Salt Lake City, Utah. The consideration is $100,000.

Salt Lake City, Utah.—The plumbing firm of Carthey & Dumbeck, of 219 South State street, has been incorporated with a capital stock of $24,000. The officers of the company are: F. G. Carthey, president; R. Dumbeck, vice-president and manager; R. F. Carthey, secretary and treasurer.

San Francisco, Cal.—Work is being rushed on the installation of the kitchen fixtures in the New Palace Hotel, and this work entails considerable piping and gas fitting. The hotel will be opened to the public on November 9th. The plumbing work has been installed, tested and accepted, but there will probably be some work to do from time to time in installing the barber shop fixtures, etc.

San Francisco, Cal.—Portola week, or a day or two before the great event commences, will mark the meeting of the Executive Committee of the State Master Plumbers' Association. Business meetings will extend over two or three days and then the members will be given an opportunity of partaking of the pleasures that will come with the event for which all San Francisco has been preparing for the past eight months. In addition to the regular members of the Executive Committee it is expected that there will be a number of other master plumbers from various sections of the state here and a good time generally is being anticipated.

Cleveland, O.—The Chappell & Warren Company, of this city, has secured the contract for the installation of a heating and ventilating system in the new annex to the Willard school.

THE SHOP BOOKSHELF

Being a brief mention of late publications which are worthy of special notice because of their unusual interest to the trade. They should be on "The Shop Bookshelf" in every plumbing and steam fitting establishment for instant reference. A free copy of any publication referred to under this heading may usually be had by mentioning "Domestic Engineering" when you write.

From Kewanee Boiler Co., Kewanee, Ill.: "Catalogue No. 54," size 6x9 inches, twenty-four pages, paper covers. Nicely printed on high quality paper stock, well illustrated with half tone engravings. This catalogue is a very attractive presentation of the merits of the Kewanee Fire Box Boilers and is good reading for the heating trade.

From the American Tap and Die Company, Greenfield, Mass.: 1909 Catalogue "Adamantine" Threading tools. Size 6x9 inches, 72 pages, bound in heavy paper covers, illustrated throughout with fine engravings. They list a varied line of Screw Plates, Tap Wrenches, Stocks, Dies and Reamers.

From Cameron, Schroth, Cameron Co., 189 Michigan street, Chicago: A richly printed book on "Richmond" Boilers and Radiators. Size 8x10 inches, bound in double heavy paper covers, 80 pages. Contains a large number of excellent engravings. While explaining the merits of "Richmond" product, it contains much valuable data of interest to user, architect and trade.

From the Norton Company, Worcester, Mass.: A neat little booklet entitled "Facts Worth Knowing About Grinding Wheels." Size 3½x3¼ inches, twelve pages, illustrated. Subjects covered include: Material Used in Making Grinding Wheels; How to Mount Wheels; Rules for Obtaining Surface Speeds, and for Calculating Speeds and Diameters of Pulleys; Causes of Breakage of Wheels, etc.

From the J. L. Mott Iron Works, New York City: A 9¼x12 inch catalogue of 132 pages, bound in double heavy card board. The book contains rich half tone engravings and is elegantly printed on the finest paper stock. The illustrations and descriptions of this company's large line of Hospital Fixtures is most complete. The book itself is one of the finest examples of the printer's and engraver's art that we have seen for some time.

From National Tube Co., Pittsburg, Pa.: A heavily cloth bound catalogue "H" of 470 pages, size 5¼x7¾ inches. Contains over one thousand half tone engravings of almost every variety of Wrought Pipe; Cast, Malleable Iron and Brass Fittings; Brass and Iron Body Valves and Cocks; Radiators and Coils; Drive Well Points and Well Supplies. This volume is an ornament to any dealer's bookshelf, as well as an invaluable book of reference and price list.

From the Ideal Mfg. Co., Detroit, Mich.: A 6¼x7 inch circular illustrating and describing the "Ideal" Adjustable Boiler Stand. A 4¾x6¾ inch circular illustrating and describing their "Ideal" factory closet combination for use in all places requiring a closet outfit of exceptional strength and durability. Also a four page, 4⅞x6¾ inch folder illustrating and describing their

"Ideal" combination long sweep cleanout fitting and their "K" pattern combination sanitary tee.

From the Joseph Dixon Crucible Company, Jersey City, N. J.: A twelve page booklet of envelope size, describing their facings for various kinds of work. The listings include prices. Some general information in brief on the proper use of facings, values of different kinds, working conditions met in foundry practice, etc., occurs in the booklet. How a facing actually behaves in the mold is accurately described by an analogy to a drop of water on a red hot stove. It is explained how the water itself never comes in actual contact with the hot surface. Very interesting and instructive.

From Cameron, Schroth, Cameron Co., 189 Michigan street, Chicago: Catalogue "A." Heavily bound in cloth, size 4x7 inches, 298 pages, profusely illustrated with good half tone engravings. This catalogue covers every requirement for Steam and Hot Water Heating Apparatus, including Sectional, Firebox and Tubular Boilers, Tank and Laundry Heaters, Radiators, Pipe, Fittings, Valves, Specialties, Pipe Covering and Tools. With its illustrations, tables and data it is very complete, making it possible for the trade to estimate on any work without reference to any other catalogue.

St. Louis, Mo.—The John B. Hughes Heating Company, of this city, has been awarded the contract for the installation of a heating and ventilating system in the new hospital at the Federal prison at Leavenworth, Kansas. The contract amounts to $7,815.

WITH THE MAKERS

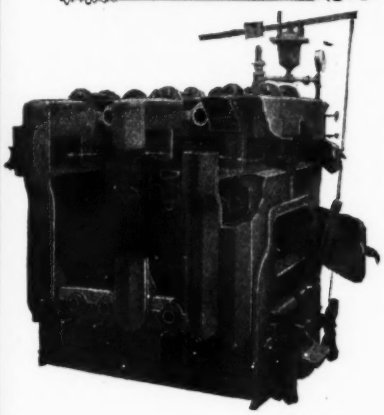
An Unusual Guarantee On Radiators.

The Pressed Radiator Company of America, Pittsburg, Pa., is taking a very unprecedented stand as regards the guaranteeing of its product. Some manufacturers of radiators guarantee only against defects in manufacture, whereas this company guarantees its goods from its manufacture to the proper and satisfactory performance of its duty. Full details with a copy of its new form of guarantee can be had of the company upon request, mentioning "Domestic Engineering."

Do Not Approve of Working Double Turn.

A very interesting manufacturing fact was brought to light at a recent meeting of some of the largest manufacturing interests held in Washington, D. C. It developed during the address of Mr. Geo. H. Bailey, President of the Pittsburg Sanitary Mfg. Co., of Pittsburg, that his concern has always been most strongly opposed to working at night. "Our objection to this," said Mr. Bailey "is that it is absolutely impossible to work by artificial light with the same perfection as is possible with day light. Do not misunderstand me to say that work cannot be performed by artificial light, but where absolute perfection is to be secured, the best conditions must prevail. In our factories at Coraopolis, for instance, strict orders are enforced that the plants must not work at night—so as to insure a product of the highest quality." Few manufacturers have taken

CAPITOL BOILERS AND RADIATORS



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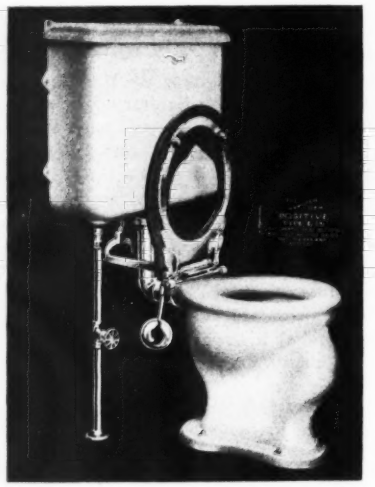
ST. LOUIS, MO., L. M. Rumsey Manufacturing Co.
DENVER, COLO., Kellogg & Stokes Stove Co.
DULUTH, MINN., Duluth Plumbing Supply Co.

this important matter into consideration. Shadows and reflections both have a tendency to permit a flaw to pass unnoticed. Especially is this true of sanitary ware where reflecions are very prominent. The Pittsburg Sanitary Mfg. Co. makes the Steel King closet tanks, made entirely of seamless steel.

A Newly Patented Automatic Seat Action Closet Combination.

On September 14, 1909, the Patent Office at Washington, issued a patent to John H. Davis of the Sanitary Mfg. Co., Hamilton, Ohio, on an automatic seat-action closet, as mentioned in our patent column last week. The accompanying engraving gives a good idea of the



The Hamilton Gem Positive Type "E" 24 Closet Combination.

general appearance of this closet, which will be known as "Positive Type E" 24 low down combination, designed for school, office, library buildings and public places. The seat operating device for flushing is an entirely new feature of importance. It is positive in its results, always thoroughly flushing the bowl with no noise that can be heard outside of the room. The makers of this type closet issue a challange to test their product in competition with any other closet, with any water pressure from one to five hundred pounds. A very interesting and instructive circular with full information will be sent to those who write for it and mention "Domestic Engineering."

A Successful Closet Flushing Valve.

Many who have used closet flushing valves in the past have found them far from satisfactory. A. N. Pasman, of 2 Foye Place, Jersey City, N. J., claims to have solved the problem of a proper construction in his Crest Flush Valve. This valve has only two vertical moving parts with water packed piston. In installing and adjusting, it requires but ordinary care on the part of the plumber to avoid all possibility of subsequent trouble and annoyance. The valve operates successfully under any water pressure from 150 to 300 pounds. Those desiring to post themselves on the latest developments in flushing valves should mention "Domestic ngineering" when writing the manufacturer for information.

PATENTS

934,455. Water Closet. Michael F. McElroy, Providence, R. I.

934,503 Ratchet-Wrench. Ray F. Chapman, Content, Alberta, Canada.

934,504. Meter for Liquids and Gases. Frederick N. Connet, Providence, R. I.

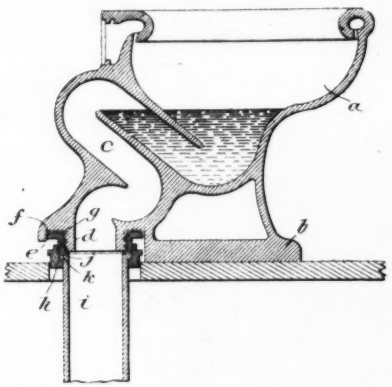
934,517. Combined Heating-Plate and Water-Heater. Lewis Galloway, Montclair, N. J.

934,520. Device for Passing Cables Through Water-Pipes. Hugh A. Greenan, New York, N. Y., assignor, by mense assignments, to National Water Main Cleaning Company, New York, N. Y., a Corporation of Maine.

934,548. Check-Valve. Hosea K. Kriebel and Irwin Z. Kriebel, Philadelphia, Pa.

934,563. Safety-Valve. Frank S. McIntyre, Pittsburg, Pa.

934,975. Soil-Pipe Coupling for Water Closets. John F. Kelly, Trenton, N. J., assignor to Thomas Maddock's Sons Co., Trenton, N. J., a Corporation of New Jersey. Of the nine claims made for this invention probably the most interesting reads as follows: "In a water closet, the combination of a bowl having an integral base, a siphon discharge having the inner portion of its outlet



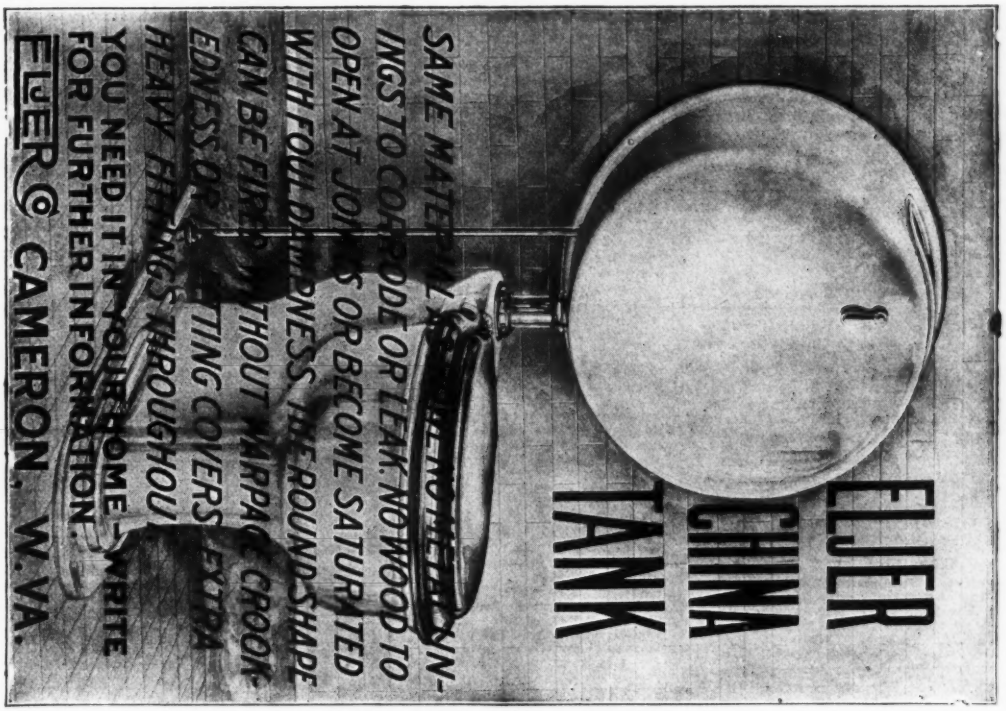
formed integral with and supported on the base of the bowl, the outer part of the siphon discharge outlet being cut away adjacent to the floor, and a soil pipe connection with the siphon discharge which is accessible through the cut away portion."

934,598. Heat-Regulator. Milton J. Farquhar, Wilmington, Ohio.

934,614. Valve. Charles E. Huxley, Buffalo, N. Y.

934,620. Liquid Shut-Off. Henry Mueller, Decatur, Ill., assignor to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois.

934,647. Cistern. Olin M. Alexander, Anniston, Ala.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934,632. Temperature-Regulator. Hermann Sandvoss, Dusseldorf, Germany.

934,663. Pipe Hanger. Henry C. Folger, Medford. Mass., assignor to Acme Manufacturing Company, Bangor, Me., a Corporation of Maine.

934,664. Trap. Henry C. Folger, Medford, Mass., assignor to Acme Manufacturing Company, Bangor, Me., a Corporation of Maine.

934,687. Pipe-Coupling. Henry Mueller, Decatur, Ill., assignor to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois.

934,688. Cock. Philip Mueller and Anton C. Schuermann, Decatur, Ill., assignors to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. One of the broadest claims made for this invention reads as follows: "The combination with two members having opposed annular undulated ways, and means for turning one member relatively to the other; of a series of rollers disposed between said ways, a ring-shaped spider surrounding the rollers, and pins projecting from the spider radially inward and on which said rollers are journaled, the outer ends of the rollers being rounded off transversely on a greater curvature than the interior of said ring and the inner ends of their bores countersunk, and the inner ends of said pins being upset within said countersinks."

934,711. Soldering Device. Frank S. Chapman, Kenton, Ohio.

934,780. Gas-Pressure Regulator. John G. Wilson, New York, N. Y.

934,846. Water-Sealed Valve. Leonard Shaw, Chicago, Ill.

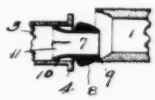
934,850. Pipe-Vise. Herbert H. Steele, Marcellus, N. Y.

934,903. Hot-Water and Steam Heater. George R. Fassett and Andrew D. Macbeth, Lakewood, Ohio.

934,917. Septic Tank. August W. Huhsman, Staunton, Ill.

934,932. Valve for Heating Apparatus. Millard P. Osbourn, Merchantville, N. J., assignor to Warren Webster & Company, a Corporation of New Jersey.

934,983. Pipe Connection. Anton C. Schuermann, Decatur, Ill., assignor to H. Mueller Mfg. Company, Decatur, Ill., a Corporation of Illinois. One of the five claims made for this invention is as follows: "As an article of manufacture, a gasket for pipe connections comprising a yielding joint ring, and a stiff sustaining



ring extending through and longer than the joint ring, the sustaining ring being flared at one end beyond the joint ring to retain the latter thereon and having at its other end outwardly bent spring fingers, for the purpose set forth."

Burlington, Ia.—The Russell Sewage Disposal Company, of this city, during the last few days has shipped five of its sewerless sewage disposal systems to different localities in this state.—Adv.

CLASSIFIED ADVERTISEMENTS

The rate of advertising under this heading is 25 cents a line, or 5 cents a word, for an insertion, remittance to be made with order. To insure insertion in this column copy should be received not later than Wednesday morning.

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Wanted.—A first-class plumber; one who knows how and will; steady job for right man. E. L. Stallings Co., Spartanburg, N. C.

WANTED—FIRST CLASS NON-UNION plumbers Steady work Five dollars for eight hours. Denver Master Plumbers Association. 214. Nassau Block. Denver Colo.

WANTED — SUPERINTENDENT for brass factory. Liberal salary. Must have experience in plumbers' brass goods. No. 155, "Domestic Engineering," Chicago.

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WANTED — BY A PROMINENT Eastern Manufacturer of Plumbing Fixtures, a representative for New Mexico and Arizona, who is familiar with the trade; preferably as a side line and on commission basis. Address No. 131, "Domestic Engineering," 150 Nassau St. New York City.

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For Sale.—Splendid opportunity to buy old established running plumbing business in Buffalo, N. Y., to close estate. "Buffalo Means Business." Address, J. F. Patterson, Erie Co. Bank Bldg., Buffalo, N. Y.

For Sale.—Stock of Staple Plumbing Material and Tools. Will invoice about $1,800. Will sell for 80% of invoice price. L. S. B., 209 W. Main St., Robinson, Ill.

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Plumbing Schools.

LEARN PLUMBING ON NEW buildings for $50.00; catalog free. Enterprise Plumbing Const. Company, 3659 Finney Ave., St. Louis, Mo.

Books.

Sanitation in the Modern Home. By Jno. K. Allen. An invaluable guide to the architect, plumber, heating engineer and house owner, telling just what is necessary to make a house completely sanitary from the subsoil to the roof. 8x5¼ inches; 272 pp.; bound in cloth; postpaid, $2.00. "Domestic Engineering," Chicago.

Notes on Heating and Ventilation. Second edition. By Prof. John R. Allen. Written primarily for the steamfitter and designer of heating systems. Reduced to as brief a form as possible, so that readers can readily find notes or data desired. Bound in cloth, 6¾x4¾ inches; 272 pp.; postpaid, $2.00. "Domestic Engineering," Chicago.

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Swimming Pools. By Jno. K. Allen. Their construction; cold and hot water supply; various methods of heating the water; directions as to selecting correct sizes of heaters. A practical guide to the subject. Over thirty illustrations; 6½x4¾ inches. Postpaid, 50 cents. "Domestic Engineering," Chicago.

Roughing-in House Drains. Edited by Jno. K. Allen. A complete guide to the work of roughing-in plumbing, from the digging of the sewer to the finishing length of the soil and vent stacks, giving each step to be taken and telling how and why it is done. 6¼x4¼ inches; 184 pp.; bound in boards. Postpaid, 50 cents. "Domestic Engineering," Chicago.

Dean's Steamfitter's Computation Book. Contains figured cubical contents of rooms of different sizes and ceiling heights; also tables showing radiation necessary at various rates per square foot of glass surface, wall surface, or cubic feet; also square feet of glass or wall in surfaces of various dimensions; also cost of selling price of radiators at various market prices. These tables save fitters thousands of arithmetical calculations, giving the answers ready to hand. Leather bound; 7¾x5 inches; 90 pp. postage prepaid, $2.50. "Domestic Engineering," Chicago.

Salesmen's List of Jobbers of Plumbing Supplies. Bound in cloth; pocket size. Sent postpaid for one dollar. "Domestic Engineering," Chicago.

Tables for Calculating Sizes of Steam Pipes. By Isaac Chaimovitsch. These tables furnish a method of determining sizes of steam pipes for low pressure heating without laborious mathematical calculations; bound in cloth; 4½x6⅞ in.; 47 pp.; postpaid $2.00. "Domestic Engineering," Chicago.

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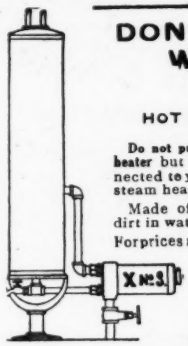

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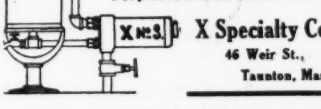

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